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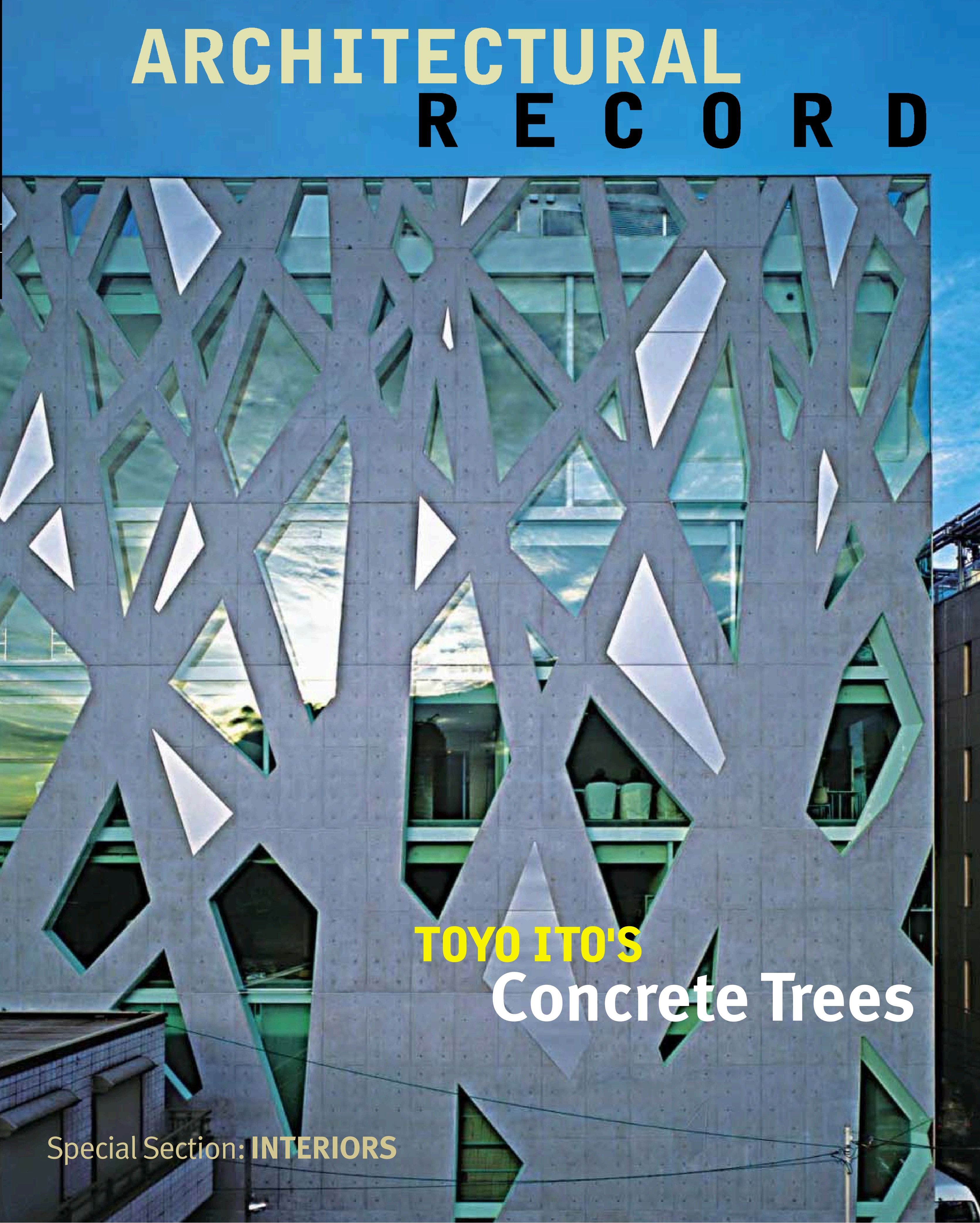

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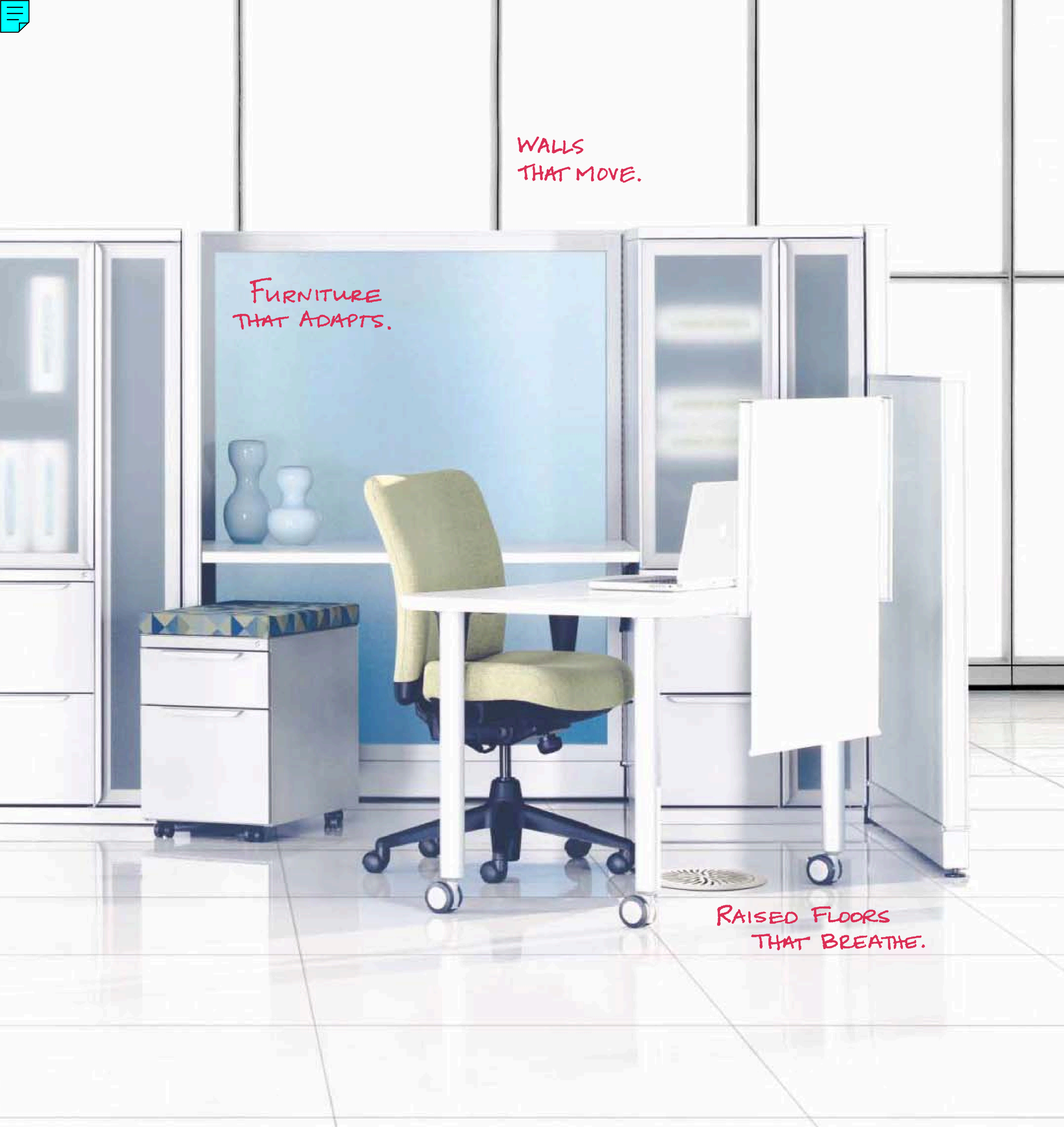
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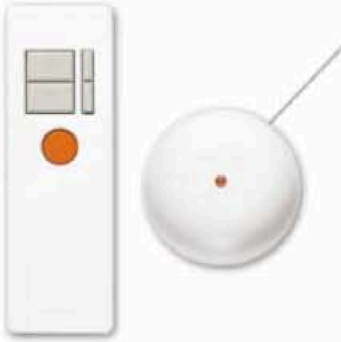

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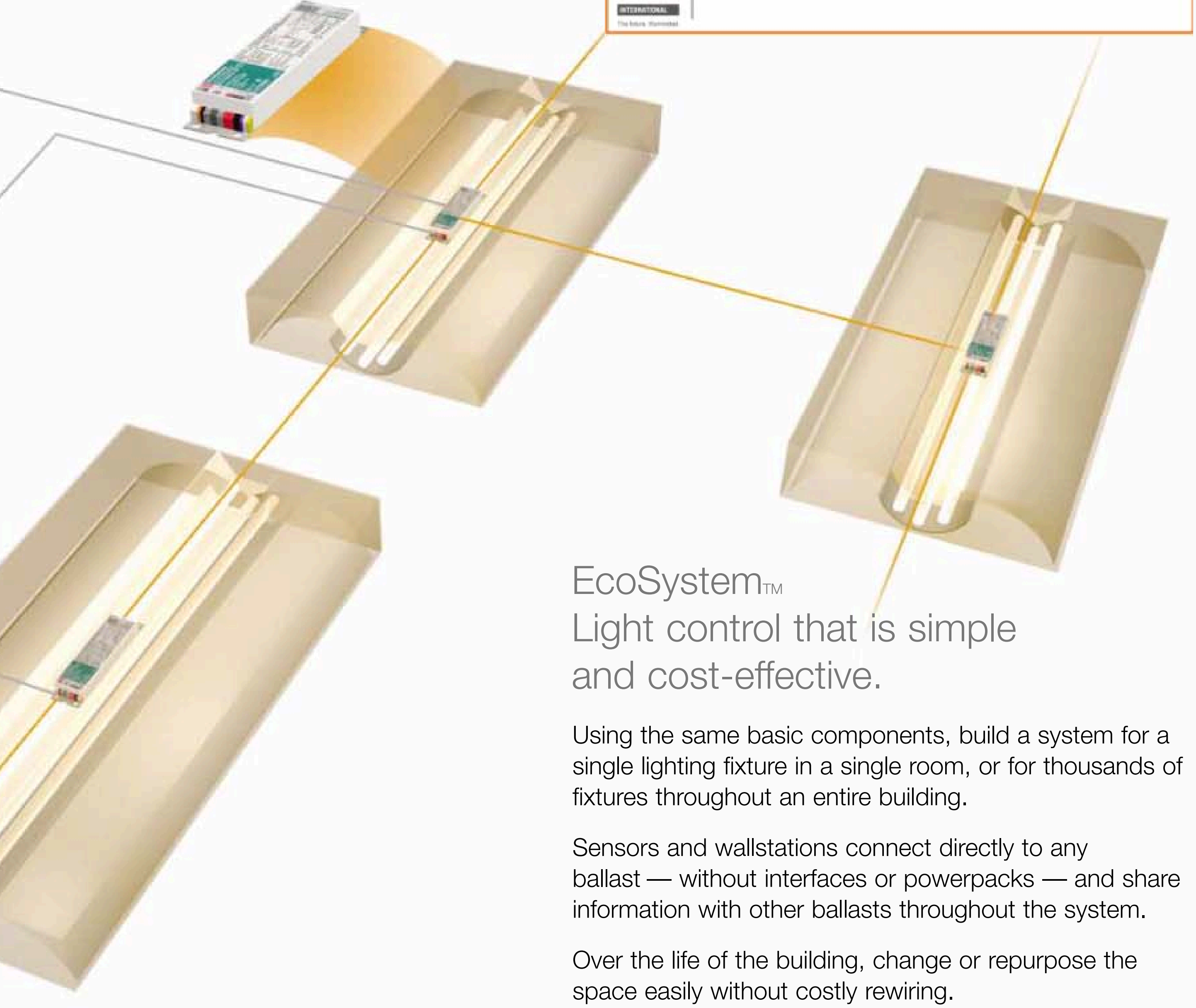

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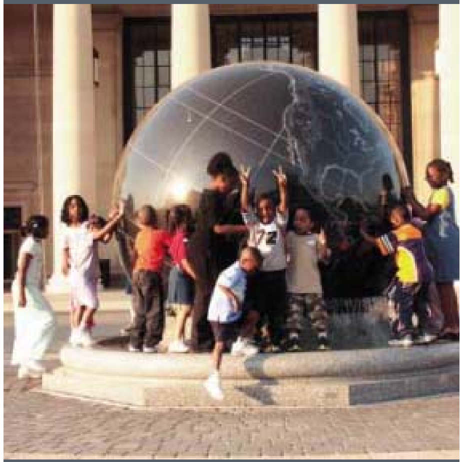

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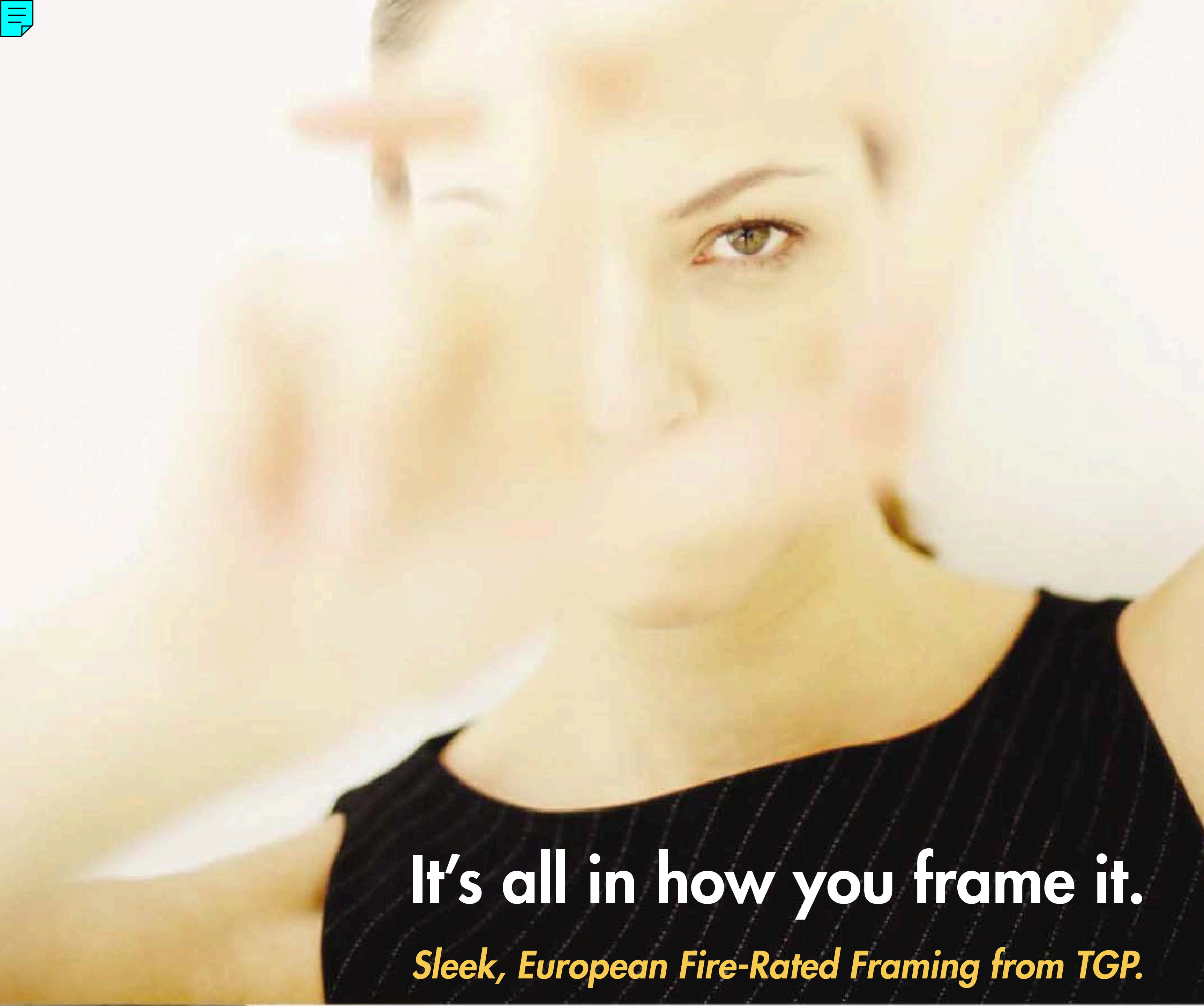

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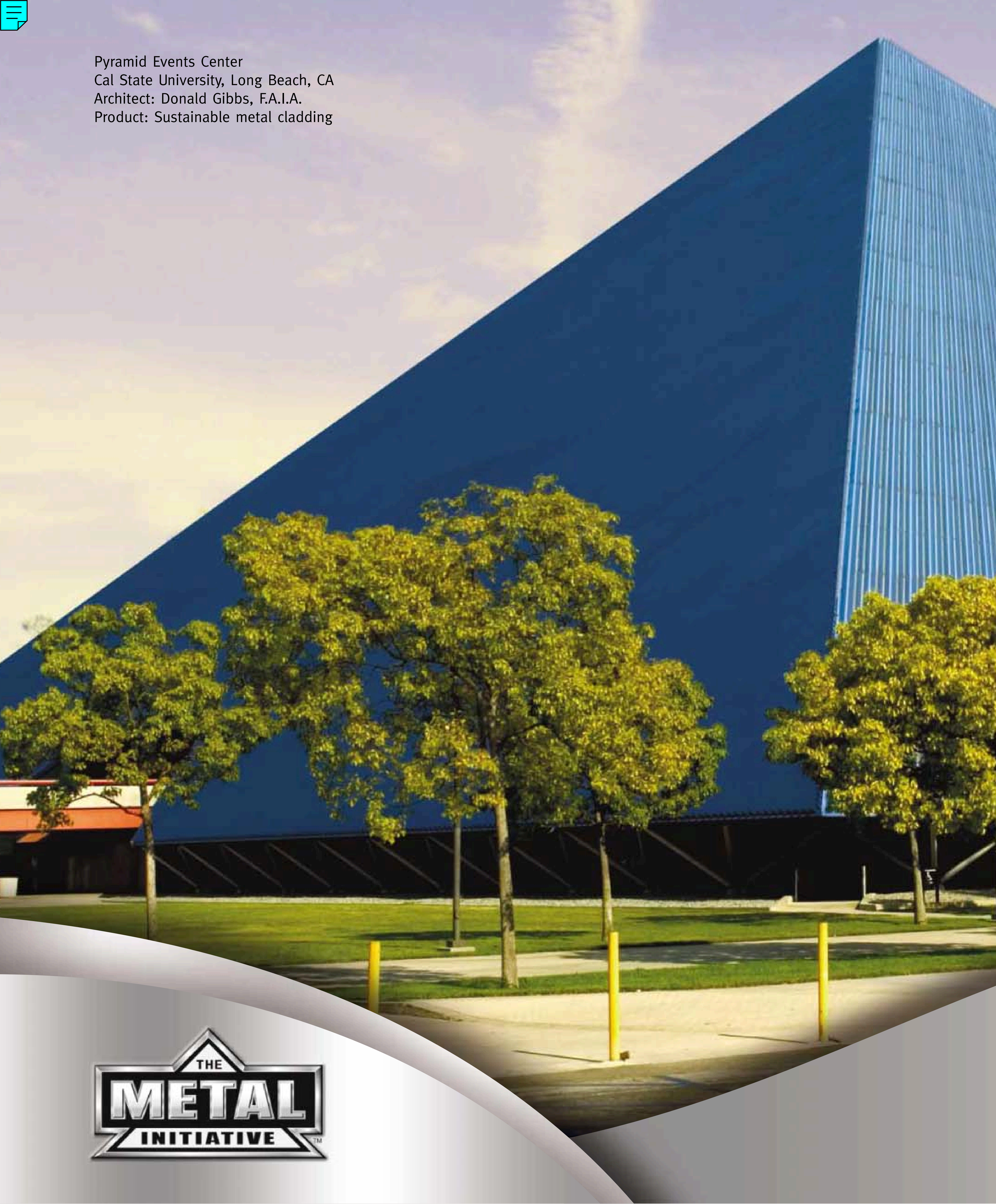
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Brownfield of dreams.

“Buildings should feel local,” says David Greusel, a principal with HOK Venue in Kansas City. He’s the design architect of PNC Park in Pittsburgh and Minute Maid Park in Houston, two of major league baseball’s most celebrated new venues.

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Greusel's directive was recently brought to life in Dubuque, Iowa, where he helped transform an abandoned brownfield site along a Mississippi flood plain into Grand River Center, one of the country's most spectacular waterside meeting and convention venues.

Created from native Iowa limestone and a shimmering cascade of high-performance solar control glass, Grand River Center aligns Greusel's desire to work with indigenous building materials with his natural instinct to create dwellings that harmonize with the environment.

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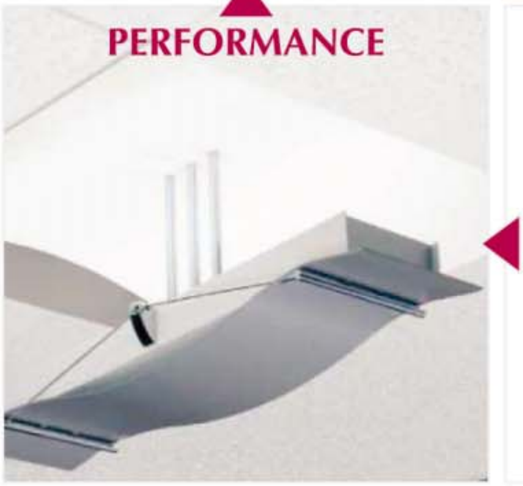

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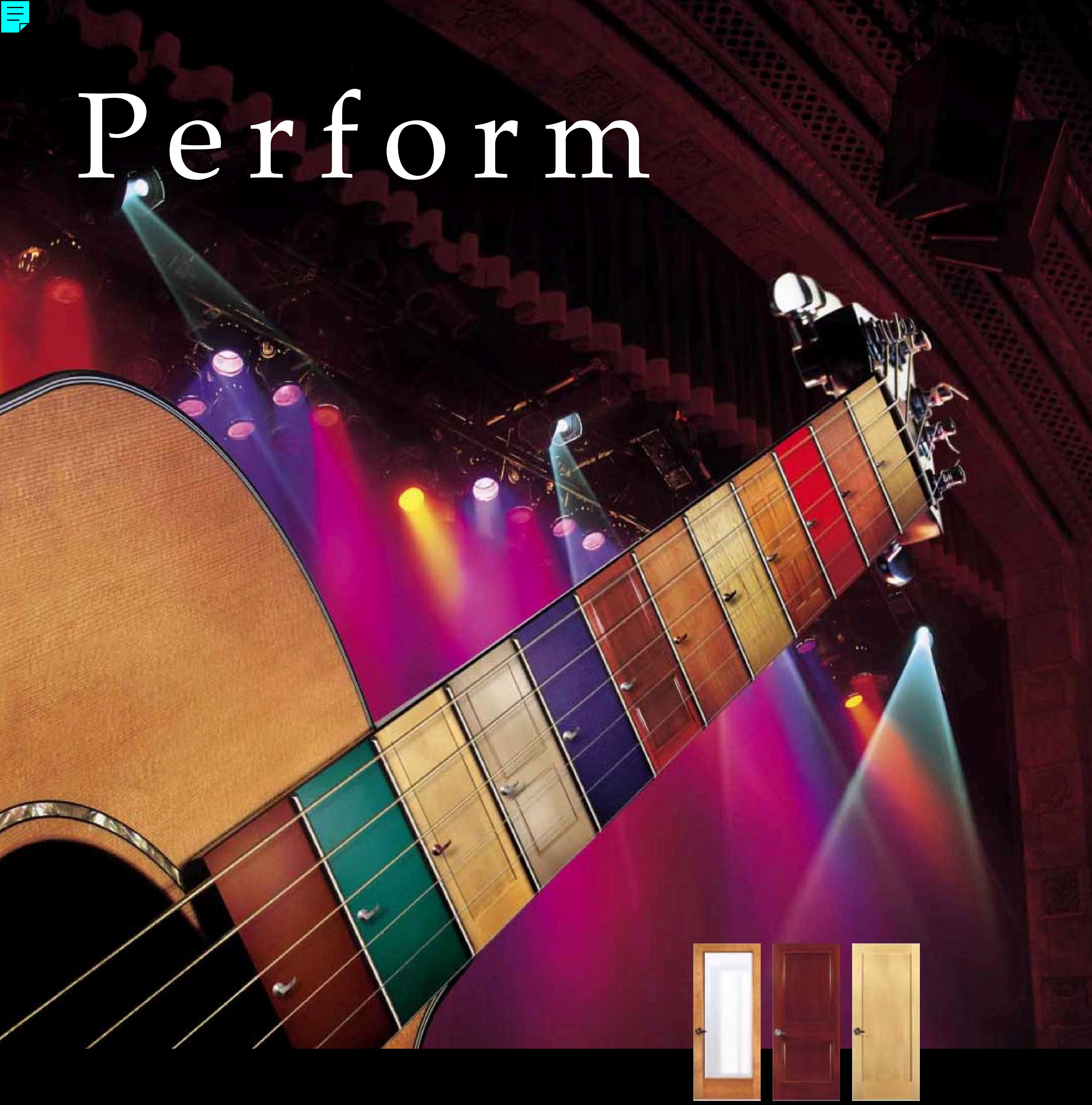

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Super-size Me?

Editorial

By Robert Ivy, FAIA

It erupted as a primal scream from a frazzled-looking conventioneer leaning against a wall, hair askew, punctuated by a complaint repeated by others in corridors and grand spaces: "Get me out of here!" Not everyone felt it; many, if not most, reveled in the mix. Still, some visitors to the rousingly successful AIA National Convention, which attracted a record number (24,500) to its positive energy, experienced a type of sensory overload and psychological distress. Their discomfiture bears scrutiny, since the source of their collective angst lies embedded in architecture.

The problem, in a word, is Big. It makes some of us, like the distressed visitor, lose our emotional cool. The occasional human reaction to excessively fulsome crowds and sizable spaces has a big name for a real condition—agoraphobia. In its classic sense, the term refers to the fear of open spaces. Related to claustrophobia, it breeds in gigantic enclosures, and includes phobias centered on crowds, shops, and public places; psychologists describe one operable variant as the fear of shopping malls. Fueled by large milling crowds, it can produce a kind of nameless panic, exacerbated by hermetic environments such as the typical humongous Las Vegas casino/hotel/convention complex, where visible exits to air and sunlight are remote, few, and hard to find.

You may have experienced twinges of its effects in high-rise New York, or like Bill Murray in the movie Lost in Translation, *who was hit with a heavy case of ennui awakening in a hotel tower far above Tokyo. Dislocated and out of sorts, he was literally, hilariously removed from reality and mired in an existential dilemma. He, and a few conventioneers in Nevada, suffered distress, if not full-blown agoraphobia. Sound familiar?*

What are the architectural determinants of this mini-paranoia? A primary cause is scale. Despite the American penchant for the super-sized, not all vastness is benevolent: Gigantism contains traces of bombast and overt manipulation mixed in with the fun. At mass gathering places, with few retreats for intimacy or personal space, we are literally being herded and told how to feel. In hotels with 5,000 rooms and tens of thousands of conventioneers, mega-corridors that extend for hundreds of yards, as high and wide as Mammoth Cave, even those that twist and turn seductively can prove oppressive rather than expansive, stifling human presence and producing dread mixed with awe. Skylights, if placed too high, will not necessarily alleviate the gloom, nor will atria, which can contribute their own oppressive weight.

To scale, add excessive sensory stimulation. In the typical Vegas public interior, we are bombarded with sound, from the '60s-funky Muzak in the elevators to the accelerating ka-chink of the slots. The air reeks of smoke, or air freshener, or eucalyptus. Oxygen whooshes; lights blink and pop. In the desert, where temperatures can soar above 100 degrees Fahrenheit in May, conditioned environments have superseded the open-air strip, permitting a seamless transition from internalized plane to car to hotel room. You never need break a sweat.

We might dismiss Vegas as our beloved aberration, our own neon American Pie, except for the way it has come to crystallize certain distinctly American values. The strip has become the urban equivalent of a halftime show at the Super Bowl—big and universally embraced here, but what is it all about? Since the world seems bent on adopting heroic American consumerism, it looks to Las Vegas as much as to Main Street, U.S.A. The massively scaled cities of China and India, for example, hold the potential for the best of urban life as well as the worst excesses of contemporary material culture. Will their reinvented cities ape the big, broad stroke or the fine-grained? Will they prove life-enhancing or overwhelming? Like it or not, Vegas seems to hold sway in the collective imagination.

Meanwhile, the desert city continues to pack 'em in, attracting 38 million tourists per annum, 6,000 to 8,000 new residents per month, and billions in construction dollars. The most expensive project yet built there, the sophisticated new Wynn resort complex, completed in 2004, cost $2.7 billion. The phenomenon is growing: Plans are under way for the MGM Mirage's Project CityCenter, which will exceed any previous construction on the Richter scale, a strip metropolis on 66 acres of prime caliche. Super-size me!

The 2005 convention was a hit. People loved the town. But Las Vegas also teaches us to ask which American dream we are helping to construct, at home and abroad, and whether it will provoke delight or panic. Before you draw another line, ask what is the scale? Where is the door? Let me out of here!

Robert Ivy

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Letters

Fruits of pro bono labor

Architecture, planning, and design are about serving the greater good, and it is encouraging when this is done in a direct manner that benefits our most underserved communities. I dispute, however, Robert Ivy's assertion in his May editorial [page 25] that public architecture is "something entirely fresh"; pro bono design has been happening at the local and national level for years.

Since the late 1960s, community design centers have been serving an active and activist role in helping community-based organizations create affordable housing, build playgrounds, expand social-service centers, and improve neighborhoods. Many of these centers are associated with universities, building a culture of community service and participatory design among its students that will carry into their professional careers. Others, like the Community Design Center of Pittsburgh, the Community Design Collaborative in Philadelphia, and the Neighborhood Design Center in Baltimore, mobilize volunteer architects, landscape architects, planners, and other design professionals to provide pro bono services in their local communities. Since 1968, the Neighborhood Design Center has assisted nearly 1,700 projects in the Baltimore-Washington area.

Something *is* in the air. And it is the result of good work and good deeds that for years were underfoot but are now blossoming into view. Further exposure of these projects and organizations will only encourage such efforts to grow.

—Mark Cameron, AIA, ASLA
Executive Director
Neighborhood Design Center
Baltimore

In the air and gaining ground

Thank you for Robert Ivy's May editorial. How exciting that he too has noticed the groundswell of enthusiasm for socially conscious architecture. There does indeed seem to be a renaissance occurring, not only in schools but also in the profession at large. This newer crowd seems to be more interested in talking to each other and building a network that can sustain widespread change in the processes and institutions through which we construct and manage the built environment. Now that ARCHITECTURAL RECORD has begun scratching the surface, it will hopefully not be long before the profession and public realize how strong this current is and how many accomplishments are being made. Something is indeed in the air, but it is also on the ground in increasing mass.

—M. Scott Ball
President
Association For Community Design
Brooklyn

A place to call home

It was such a pleasure to see Rick Joy's Desert Nomad House in the April issue [page 146]. As opposed to the preponderance of "clever" houses that flood the journals, Joy's house demonstrates principle, discipline, an understanding of materials,

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and attention to detail. It also emphasizes the house as a place to live in, rather than simply an object to look at—a home. Needless to say, it helps to have a receptive client with a wonderful art collection.

—David H. Karp
Los Angeles

Safe houses they're not

Your latest issue of Record Houses [April 2005] made me wish I were a personal injury attorney! What does it say about the state of architecture when the houses we most admire ignore their purpose of providing a safe environment for their inhabitants? Most of the stairways shown did not even have a handrail. So either the inhabitants will live in mortal danger of falling to their deaths every time they go up and down, or the architect is intending to install a railing after the photographer leaves. If the former is true, then the architect has abrogated his/her responsibility to make the house safe. If it is the latter, then he/she got lazy about finding a creative solution to a very human problem. My question is, is architecture about people, or is it the other way around?

—Paul Sheffield
Kailua, Hawaii

Architecture à la mode

Robert Campbell's questioning of architecture as metaphor in his April Critique [page 101] aims at the heart of what is troubling about much of current architecture. Fashionable design pursues metaphorical and inflexible form, while the average client is most concerned with flexibility and related issues of practicality and cost. The divergence of vogue from the everyday world threatens architecture's relevance. The giants of midcentury Modernism—Mies, Corbu, Frank Lloyd Wright, et al.—offered both fashion and a practical way to build.

—James A. Gresham, FAIA
Tucson

Better behemoths?

At 4,500 square feet, your news item's "alternative to 'McMansions' " [May 2005, page 56] is too BIG, and its severe Modernist style is just as imposing as anything on the block. It only lacks the multiplicity of roof shapes and vinyl siding featured in its more common neighbors. Can you imagine a neighborhood of these boxes plunked down in Coconut Grove? As for vistas, most developments eliminate those by building as many houses as they can. The only views to be had will be of the neighbor's new Beemer.

Whatever happened to vernacular, context, even the Disneylike new suburban-urbanism that is so popular? Florida has a residential design history that can be charming, satisfying, and even energy efficient. Why not give that a try? Build a development of hundreds of these sterile boxes cheek by jowl on dead-level lots in Coconut Grove and see if you can attract enough people willing to watch and be watched while they disport themselves in their pools or slap a steak on the old grill.

—Bill Zinner, AIA
Via e-mail

Corrections

A caption in April's Continuing Education story on high-performing envelopes [page 215] should have identified the building as the Children's Hospital of Wisconsin, not the Children's Hospital of Milwaukee. May's coverage of the Washington Mutual Leadership Center [page 320] misidentified Washington Mutual as an insurance company. In fact, it is a bank. The project cited as Lope de Vega 324 by Volvox in May's Exhibitions [page 91] is actually Higuera y Sánchez's 13 de Septiembre multi-unit housing.

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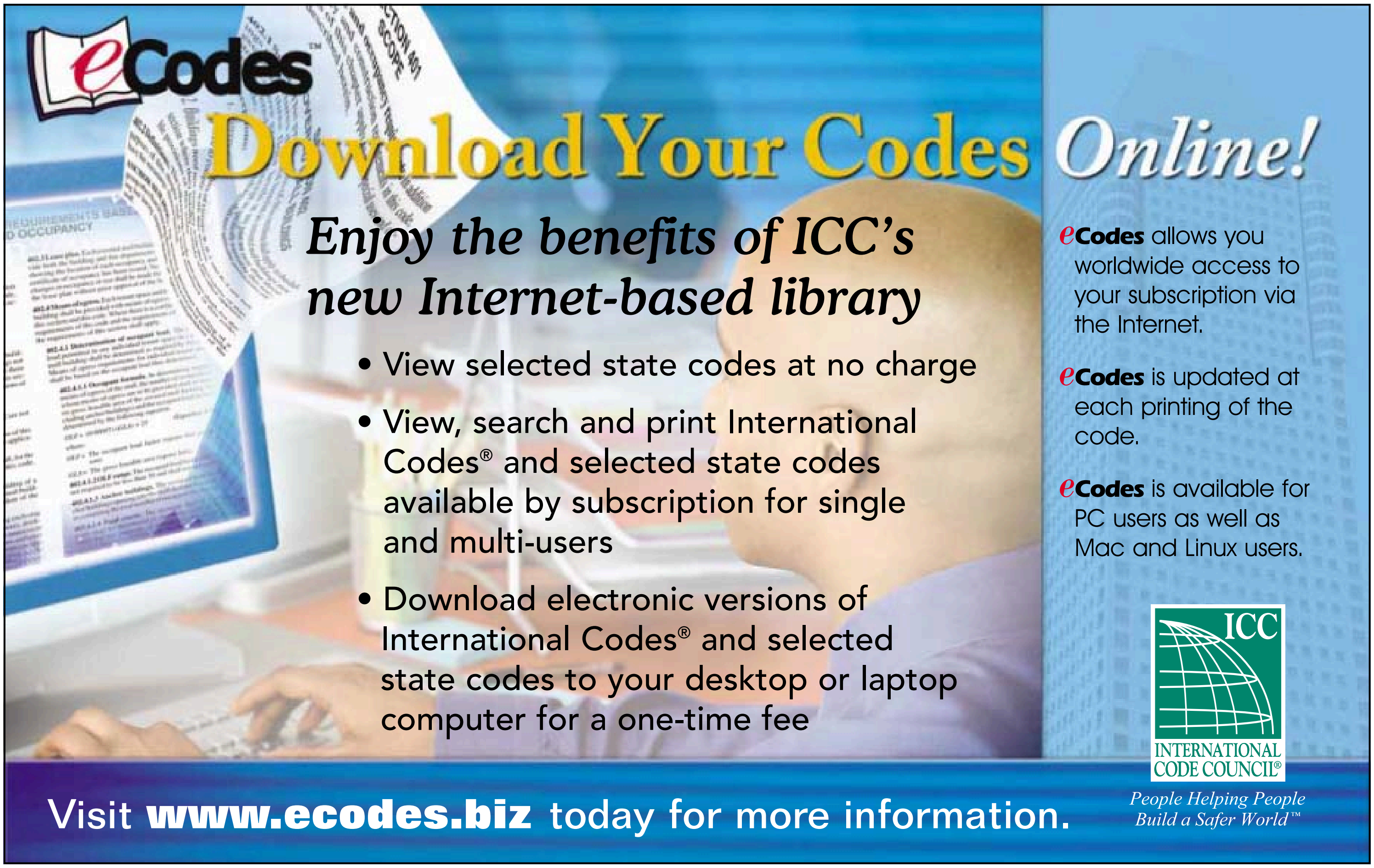

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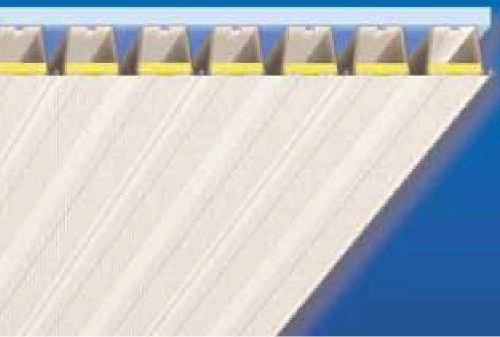

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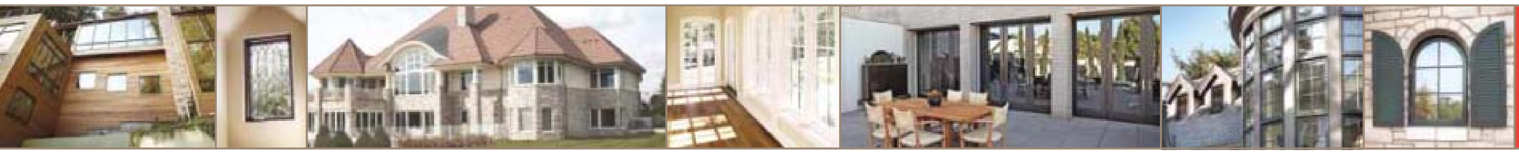

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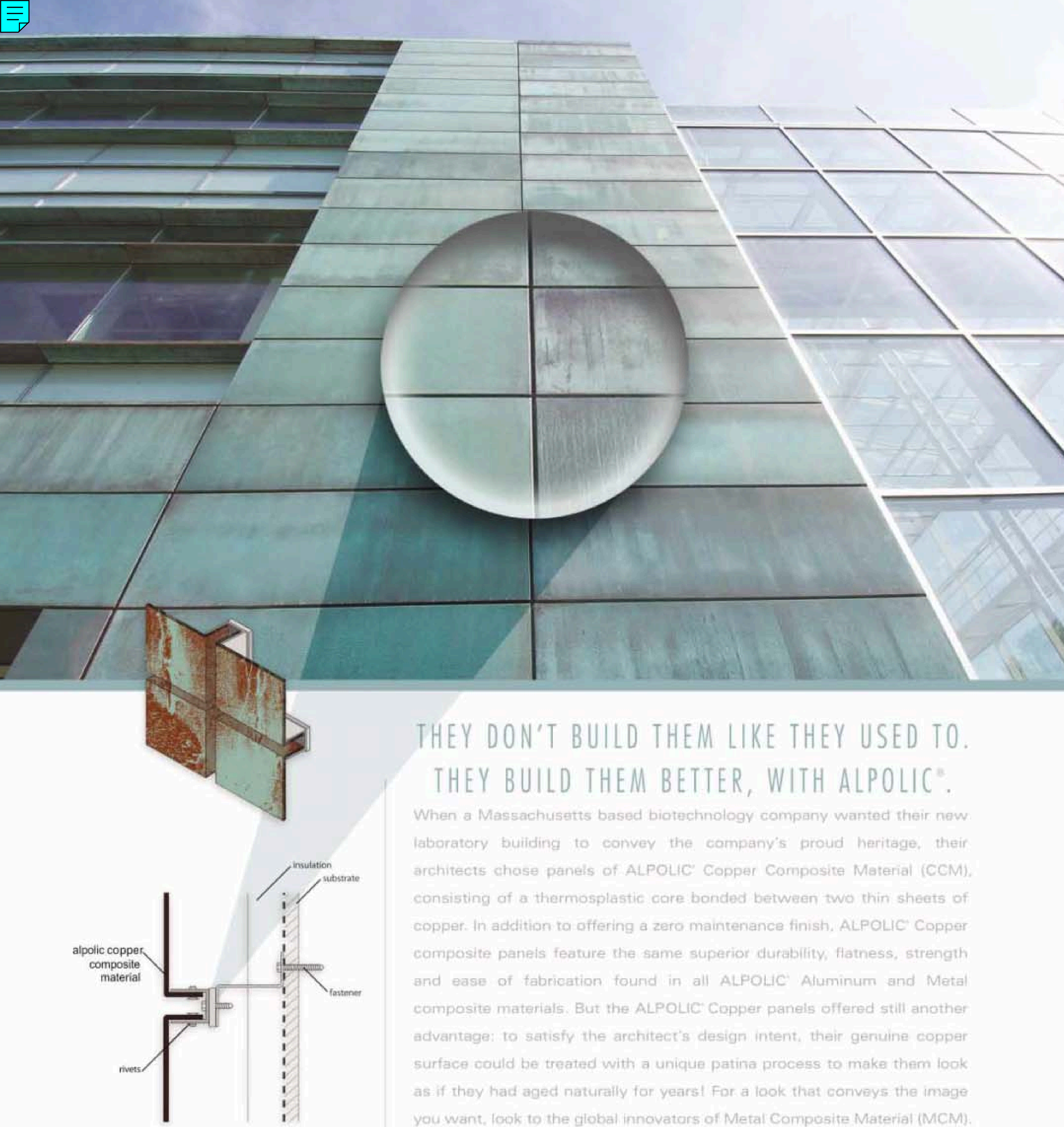

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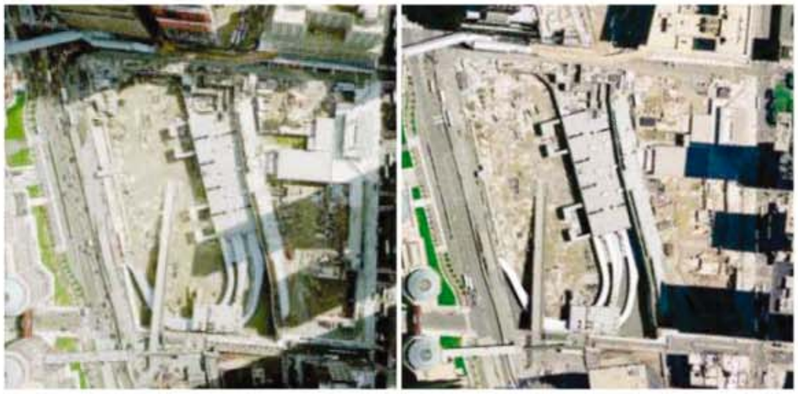
Record News

Highlights

p. 26 **SOM's Oakland Cathedral breaks ground**
p. 28 **Big Apple developers embrace architecture**
p. 30 **Group organizes prison design boycott**
p. 33 **MVRDV wins first-ever Marcus Prize**

Freedom Tower to be redesigned; serious questions at Ground Zero

The rebuilding effort at Ground Zero is facing enormous questions on several fronts, led by the announcement that its centerpiece, the 1,776-foot-tall Freedom Tower, will have to be redesigned due to security concerns. The news, made public by New York Governor George Pataki on May 4, raises concerns about the office tower project and will likely delay its progress significantly. Meanwhile, construction at the Trade Center has reached a standstill, a major rebuilding official has stepped down, and the wisdom of erecting a large amount commercial space in the area has come under increased scrutiny as a planned office building for Goldman Sachs has been postponed, and 7 World Trade Center, almost complete, struggles to find tenants.



Ground Zero in July 2004 (left), and in May 2005 (right). Besides 7 World Trade Center, the site has seen virtually no changes over that time period.

After concluding a meeting with New York Mayor Michael Bloomberg, Freedom Tower developer Larry Silverstein, and various rebuilding officials, Pataki, one of the driving forces behind the 1,776-foot-tall building's conception, announced that "a new design for the Freedom Tower is required in order to meet the NYPD's security standards." The New York Police Department first expressed concerns in early April about the twisting tower's safety, centering on the building's vulnerability to an automobile-related terrorist attack, specifically from adjacent West Street. The building is currently slated for the northwest corner of the World Trade Center site. Skidmore, Owings & Merrill (SOM), the tower's architects, will now likely have to scrap its old design and begin anew. Pataki noted on May 12 that a new design would be unveiled in late June.

Speculation abounds

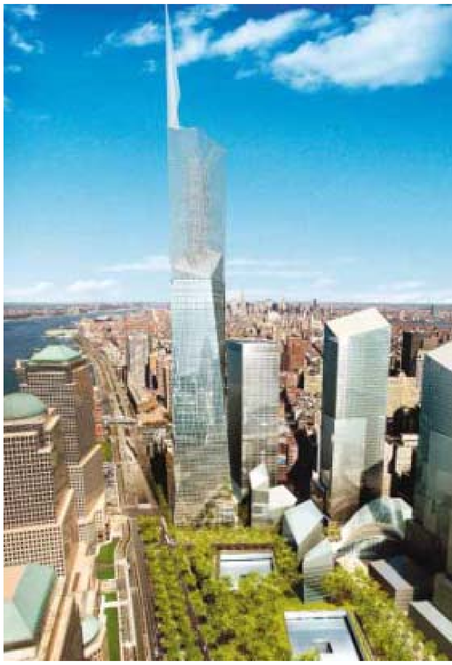
The announcement has set off a maelstrom of speculation and rumors about what could happen to the tower and its surroundings. *The New York Times* reported on May 5 that some building officials have speculated that the architects may have to remove the tower's torquing design in order to decrease the size of its floor plate, hence keeping it farther from the street. Other thoughts include moving the tower farther away from West Street. Ric Bell, FAIA, executive director of AIA New York, posits that the Freedom Tower's base may be changed from glass to concrete or titanium, and that Daniel Libeskind's asymmetrical spire may be removed. Some of the more conspiratorial rumors have included the suggestion that Mayor Bloomberg sabotaged, through the NYPD, Pataki's effort at Ground Zero because of the governor's lukewarm support of Bloomberg's plans for the West Side, or that SOM instigated the redesign to finally rid itself of the influence of tower consultant Daniel Libeskind.

SOM officials refused to comment, but Silverstein said in a statement that his team would cooperate fully with the police and the state. It is unknown how long the redesign will delay construction, but given the pace of major projects, it should be a substantial amount of time. Margaret Helfand, FAIA, founder of New York New Visions, a coalition of architects and planners focusing on design at the site, regrets that isolating buildings from the street grid will "further erode the urban fabric."

Little activity

The last completed construction on the Trade Center site was finished about a year and a half ago, the temporary PATH station at the site's northeast corner. On May 3, New York's Senator Charles Schumer told a meeting, "We are losing steam," and that a "culture of inertia has infected downtown redevelopment and our city in general." He warned that additional delays could jeopardize future federal funding, specifically for a possible link between JFK airport and Lower Manhattan.

7 WTC, rising to the north of the PATH station, stands without a major tenant, while Pei Cobb Freed's Goldman Sachs Building, to the northwest, has been put on indefinite hold, with the firm actively looking elsewhere for a site. Many real estate, design, and business leaders have long suggested that the amount of planned office space exceeds demand. Those cries have gotten louder with such tenancy issues. "It's insane," says Helfand, about the current plan for at least 10 million square feet of office space on the site. Bell agrees that site programming could be reconsidered, but points out, as have some real estate leaders, that office demand will increase with the completion of transportation infrastructure such as the slated transit hubs by Santiago Calatrava, FAIA, and Nicholas Grimshaw.



The Freedom Tower (above) will now be rethought.

Rampe out, Pryor and Cahill in

Kevin Rampe, who has been president of the Lower Manhattan

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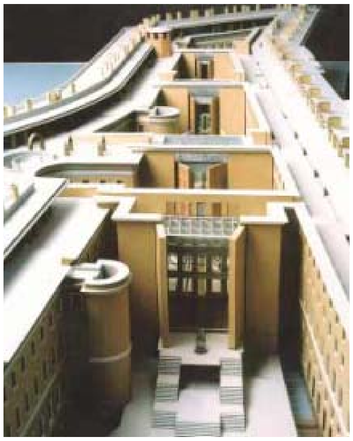
Development Corporation (LMDC)—which oversees development of the Trade Center—since 2003, announced on May 3 that he would leave his post at the end of the month. Rampe, who is leaving to work for Bermuda-based insurance company ACE, says his departure has been long-planned, and has nothing to do with the current developments. LMDC chairman John C. Whitehead announced on May 12 that Rampe would be replaced by Stefan Pryor, a longtime LMDC staffer. Pryor will report directly to John Cahill, senior policy adviser for Governor Pataki. In a May 12 speech, Pataki noted that Cahill, a seasoned politician, would coordinate efforts of all the parties at Ground Zero, focusing on the prompt delivery of the new Freedom Tower design, and reviving negotiations with Goldman Sachs. Helfand worries that Cahill, like many involved with decisions at Ground Zero, has little urban-planning or design experience.

Rampe feels recent concerns over the site are inflated, and says the Freedom Tower's new delays represent the Trade Center's only major obstacle. "Everything else is right on time," he says. "Overall, I'm surprised by how much progress we've made. There are always going to be hiccups with projects of this scale. Many people don't have the level of understanding to realize that this is what happens."

In his speech, Pataki, whose political future is tied intimately to developments at Ground Zero, made sure to note that "a new design for the Freedom Tower is not impeding any of our other rebuilding progress." Bell points out that any critique of the new Freedom Tower or of a possible "bunker" aesthetic at Ground Zero, involving too much opacity and concrete, is premature. "I'm willing to suspend disbelief for a month and wait and see what they come up with." *Sam Lubell*

Contrasting Hermitage expansion plans could muddy design process



Studio 44's plan (above) centers on the east wing's enfilade of rooms.

The State Hermitage Museum in St. Petersburg, Russia, has long tried to articulate a coherent design scheme for expanding its facilities into the nearby General Staff Building. The proposals, unveiled in Moscow on April 13, may have spelled out the two optimal approaches, but the discrepancies between them could obscure the future design process.

In 1989, the Hermitage acquired the east wing of the General Staff, a 19th-century complex designed by Carlo Rossi. It encloses the side of the Palace Square opposite the Hermitage and consists of a sprawling set of rooms and compartments. The Hermitage has designated the new space for its collection of 19th- and 20th-century art.

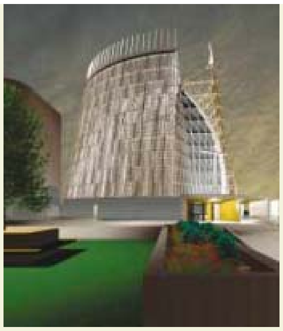
Three years ago, Studio 44, a St. Petersburg firm, won an international tender to oversee the expansion, but Office for Municipal Architecture (OMA), a participant in the competition, was retained as a consultant. The project is estimated to cost $155 million. It is partially funded by the World Bank, the Russian government, and the Hermitage-Guggenheim Foundation.

Two distinct proposals went on display at the Museum of Architecture in Moscow. In Studio 44's plan, the transverse passageways that divide the five courtyards inside the complex are linked into an enfilade of rooms that telescopes through the east wing. Shops, restaurants, and other facilities would occupy the first floor.

OMA's proposal is a calibrated intrusion rather than an overhaul of the General Staff's internal structure. A self-contained modern structure would be inserted inside the two internal courtyards, while the scheme (lacking any cohesive renderings) pays tribute to the poetic neglect of the area, trying to enable "a confrontation with art more direct and more authentic than in more 'modern' museums."

The plan, which clearly exceeds OMA's consultant role, sets itself against Studio 44's design in several parts of its presentation. None of the officials at the exhibition's press conference revealed how or if the two proposals will be reconciled. *Paul Abelsky*

SOM's Oakland Cathedral finally breaks ground



After years of uncertainty, the heavens finally aligned for the ground breaking in May of the Cathedral of Christ the Light in Oakland, California (rendering, right). Craig Hartman, FAIA, of the San Francisco office of Skidmore, Owings & Merrill, took over the $131 million project in October 2003 following the withdrawal of the original architect, Santiago Calatrava, FAIA (whose design featured a pattern of ribbed steel arches), over budget concerns. Further delays ensued when the site selected by the Diocese of Oakland could not initially be secured.

The program for the 100,000-square-foot Cathedral Center—located on the northern edge of Lake Merritt in downtown Oakland—includes a main sanctuary with a seating capacity of 1,500, smaller chapels, a baptistery, parish hall, diocese offices, conference center, rectory, library, café, and public plaza, designed by Peter Walker and Partners. Hartman's scheme was developed after extensive research into Catholic ritual, symbol, and architectural space. Most crucially, the basketlike building replaces the hierarchical plan of early cathedrals in favor of a circular arrangement of congregants around the altar, maintaining the sense of community and inclusion dictated by the Second Vatican Council in the 1960s. Additionally, the cathedral's vaults form a Vesica Pisces shape—the sacred geometry formed by the intersection of two circles—symbolically highlighting divine descent to earth.

The budget has been a challenge in the cathedral's development, Hartman acknowledges, requiring the editing of design elements and an ambitious use of technology. The cathedral's 120-foot-tall main vaults are made from Douglas fir and encased in a ceramic-frit-coated glass skin. The concrete reliquary wall at the base will be textured using molds fabricated with computer-controlled milling machines. "The intent is to use light to ennoble modest materials," Hartman explains. "It's really all about making space that is somehow emotive." *Andrew Blum*

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Big Apple residential developers embracing "signature" architects

The New York Times real estate classifieds now feature a smiling picture of Richard Meier, FAIA, advertising his new condominium tower on Charles Street in Greenwich Village. On the same page, there is a large rendering of Gwathmey Siegel's "Sculpture for Living" high-rise condo building on Astor Place in the East Village, which features "architectural" loft residences. That these architects are at the center of such aggressive marketing campaigns hints at a trend: New York developers are embracing high-quality architecture and hiring an unprecedented number of "signature" designers to build residential projects in the city.

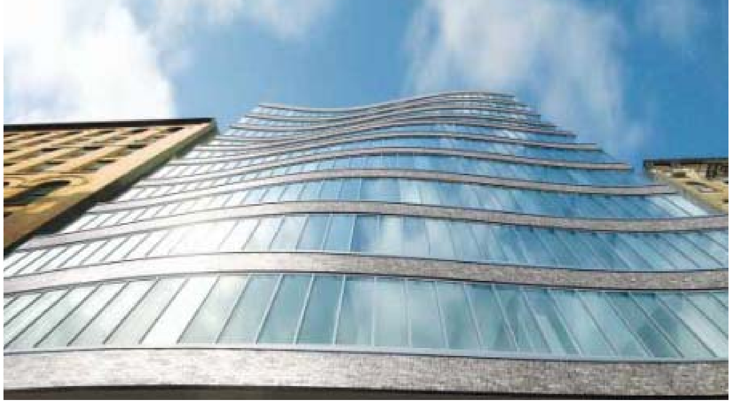
Jean Nouvel's colorful 40 Mercer project.

The list includes not only Meier and Gwathmey, but Norman Foster, Jean Nouvel, Frank Gehry, FAIA, Herzog & de Meuron, Arquitectonica, Michael Graves, FAIA, Steven Holl, AIA, Richard Rogers, Richard Gluckman, FAIA, Christian de Portzamparc, and Robert A.M. Stern, FAIA. And that's just the beginning. Meier has four New York projects, three on the Hudson River and one in Brooklyn (no wonder he's smiling). Gwathmey Siegel has six in the works: in the East Village, the West Village, SoHo, Lower Manhattan, on Park Avenue South, and in Midtown.

So why, outside of its world-capital status, has New York become the next stop on the architects du jour traveling parade? First, it seems that New York developers have discovered that investment in good architecture yields big returns.

"Name-brand architecture sells better than your typical vanilla box," says Peter Slatin, editor and publisher of *The Slatin Report*, an online, New York–based real estate newsletter (theslatinreport.com). Buyers seem to be gravitating toward what marketers label as "distinctive" designs, which are not only attractive, but exciting—one of the chief reasons many come to the city in the first place. Hence developers, long supportive of safe, bland buildings, have begun to back projects like Gluckman's One Kenmare Square on the Lower East Side, comprising a series of shifting, curved facade bands that animate the face of the building. Nouvel's 40 Mercer features glass curtain walls with alternating red and blue panes, as well as multihued flooring and loft ceilings inside. The undulating, reflective facade of Gwathmey Siegel's project on Astor Place, while attacked by some critics, has been a huge success, yielding over $2,000 per square foot, some of the most expensive real estate in the city. "As soon as this stuff translates into more money for the developer, all of a sudden design firms become relevant to them," says Gwathmey Siegel principal Robert Siegel, FAIA.

He, along with most architects working on projects in New York, say that the success of Meier's projects (which have nonetheless experienced serious delays) have helped developers drop some of their jitters about less "safe" architecture.

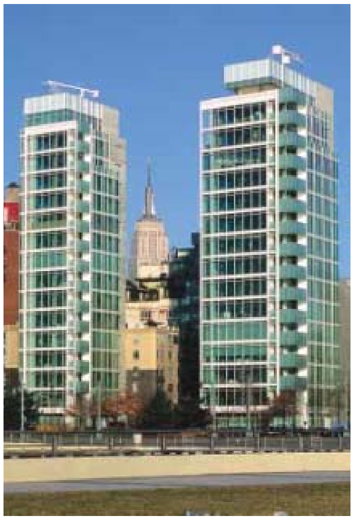


Rendering of One Kenmare Square's undulating facade.

Of course, the architects would not be in New York if developers did not have the luxury of a hot market and some of the richest clients in the world. Michael Slattery, senior vice president of the Real Estate Board of New York, points out that low interest rates and a wave of popularity spurred by improvements begun in the 1990s have encouraged record numbers to gobble up real estate in the city. One indicator of demand: The median price of a condo property in Manhattan went from $455,000 in 2000 to $640,000 in 2004, according to the board.

Spurred also by the success of designer "boutique" hotels, the trend has begun to catch on in cities like Chicago and Los Angeles, as well. But the closest comparisons are Las Vegas, with a plethora of projects on the Strip, and Miami, where Meier and other high-profile architects are working on luxury high-rises.

Meanwhile, as developers look for more top-rate architecture, they are also utilizing existing structures, effecting changes at some of the city's most treasured buildings. Already the Plaza Hotel's new owners, Elad Properties, are replacing the majority of the legendary building's rooms with condos. The original Metropolitan Life Insurance Building, a beautiful clocktower structure built in 1909 at One Madison Avenue, was recently sold to SL Green Realty Corporation for close to $1 billion to convert into condos.



Two of Meier's Hudson River condos.

Richard Lang, public affairs director for the New York Landmarks Conservancy, says that many developers are considering purchasing historic buildings in the city's Flatiron district. Cass Gilbert's Austin-Nichols Warehouse on Kent Avenue in Williamsburg, Brooklyn, is also being converted by condo developers.

The Real Estate Board's Slattery argues that "it's just the nature of the evolution of the city," and a way for the city to adapt to the changing economy. Lang agrees, and notes that condominium owners often take better care of historic properties than owners who simply rent out space. But he says he mourns the loss of public access to many great buildings, and worries about the status of many historic interiors, which can no longer be landmarked once in private hands. The Plaza's owners claim they will preserve as much as possible, as do Metropolitan Life's owners. Exteriors, too, are at risk.

"There's not much you want to change. These are beautiful buildings," says Michelle LeRoy, vice president of investor relations at SL Green. *S.L.*

IMAGES: GLUCKMAN MAYNER (TOP); HINES REAL ESTATE (MIDDLE); RICHARD MEIER & PARTNERS (BOTTOM)

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Prison design boycott aims to slow growth of correctional facilities

Protesting what it calls the moral bankruptcy and rampant growth of our nation's prison system, San Francisco–based Architects/Designers/Planners for Social Responsibility (ADPSR) has organized a boycott on the design, construction, and renovation of U.S. prisons.

The group, which has about 300 members, began the boycott in September 2004 and has signed up just over 300 participants, most of them in the design fields (not all members of ADPSR). The group's president, Raphael Sperry, an architect at 450 Architects in San Francisco, says participants can help voice disapproval of the prison system's treatment of inmates, and its inherent racial and social inequalities. But he points out that the effort is meant most of all to help stem the incredible growth of prisons in the U.S. Sperry claims prison populations have grown almost sevenfold in the past 30 years, while he estimates that at least half the prisons in this country were built during that time.

Sperry says he doubts the boycott will quickly halt the creation of new prisons, noting that if architects stop work, then prisons could enlist engineers to construct them. But if the boycott takes hold, he says, the lack of new prisons will force officials to enact prison reform "instead of using prisons as a one-size-fits-all solution to social problems." He adds, "If we keep increasing the number of prisons, we'll never be able to deal with the real problems that lead to crime." He is quick to point out that the goal of the boycott is not, however, to let dangerous criminals out of jail.

Whether the boycott succeeds or not, Sperry, who emphasizes that he doesn't blame architects for prisons' problems (he notes most are trying to improve conditions but are part of a flawed system), is confident that the voice of architects could slowly begin to sway public opinion against the system and the proliferation of prisons. "If we want to realize our vision for what the built environment should be like, we need to take leadership," he says.

Are prisons becoming too plentiful?

Edward Spooner, chairman of the AIA's Academy of Architecture for Justice, says that while he admires Sperry's desire to take a stand on prison issues, he calls the boycott a "disservice."

"To abandon our clients and not build new facilities will have a disastrous effect on individuals who are inside," he says, noting that fixing the system's problems is a better idea than walking out on it.

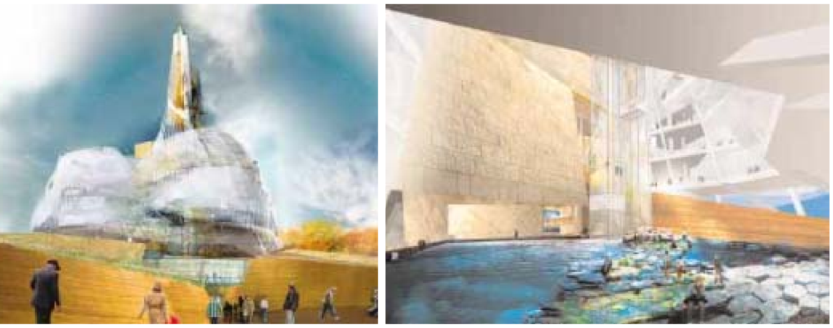
"If I were to advocate something, I'd advocate building facilities that deal more effectively with the issues that the prison population is in the facility for." This includes a stronger focus on education, vocational training, and treatment services.

Spooner, who questions Sperry's figures (noting that prison-population increases keep up with overall population increases), adds that those involved with prison design and the prison system itself are doing everything they can to remedy problems. "This is a group of people with real understanding of the problems of prisons, and a sincere desire to do the best job they can. I don't think that the best job they can do would be to let all these people out on the street." *S.L.*

Canada welcomes major museum projects

Largely because of government spending priorities and low levels of philanthropic giving, decades can pass in Canada without the prospect of any new national museums. Yet as luck would have it, within three weeks this spring, New Mexico architect Antoine Predock won a competition to design the Canadian Museum of Human Rights in Winnipeg, Manitoba, and the new Canadian War Museum, designed by Moriyama & Teshima Architects, opened in Ottawa.

Predock's design, unveiled on April 15, will be set on a massive Tyndall limestone bed, rising 300 feet like a glass-enclosed rock formation, topped by a crystalline tower. The hard effect will be softened by local tall-grass plantings, trees, and a central plaza illuminated by electronic information-display panels. The museum is expected to cost nearly $240 million.



Predock's Museum of Human Rights will be topped by a crystalline tower.

The Canadian War Museum's copper walls.

Predock describes his design as "a tower of hope" and a "beacon for humanity." His design was also a beacon for the review committee, which chose Predock over two Montreal finalists, and from an original pool of 62 firms. New York museum planner Ralph Appelbaum will design exhibits, highlighting the global sweep of human rights struggles, including the creation of Canada's Charter of Rights. When the museum opens in three or four years, it is bound to be the most dazzling piece in the otherwise conventional architectural landscape of Manitoba's provincial capital.

Halfway across the country, the 440,000-square-foot Canadian War Museum in Ottawa opened on May 8. It too tells a story—of Canada's military history and the implements of war, recalling lives sacrificed in battle.

Moriyama & Teshima Architects, Toronto, were joined by Griffiths Rankin Cook Architects, Ottawa, in the design of the $104 million, low-profile museum. It rises about 75 feet above the nearby Ottawa River and features sloping glass walls and a copper-clad roof. The museum emphasizes sustainability, using river water for cooling, concrete made with recycled fly ash, low-maintenance roof grasses, operable windows, and energy-efficient HVAC systems. *Albert Warson*

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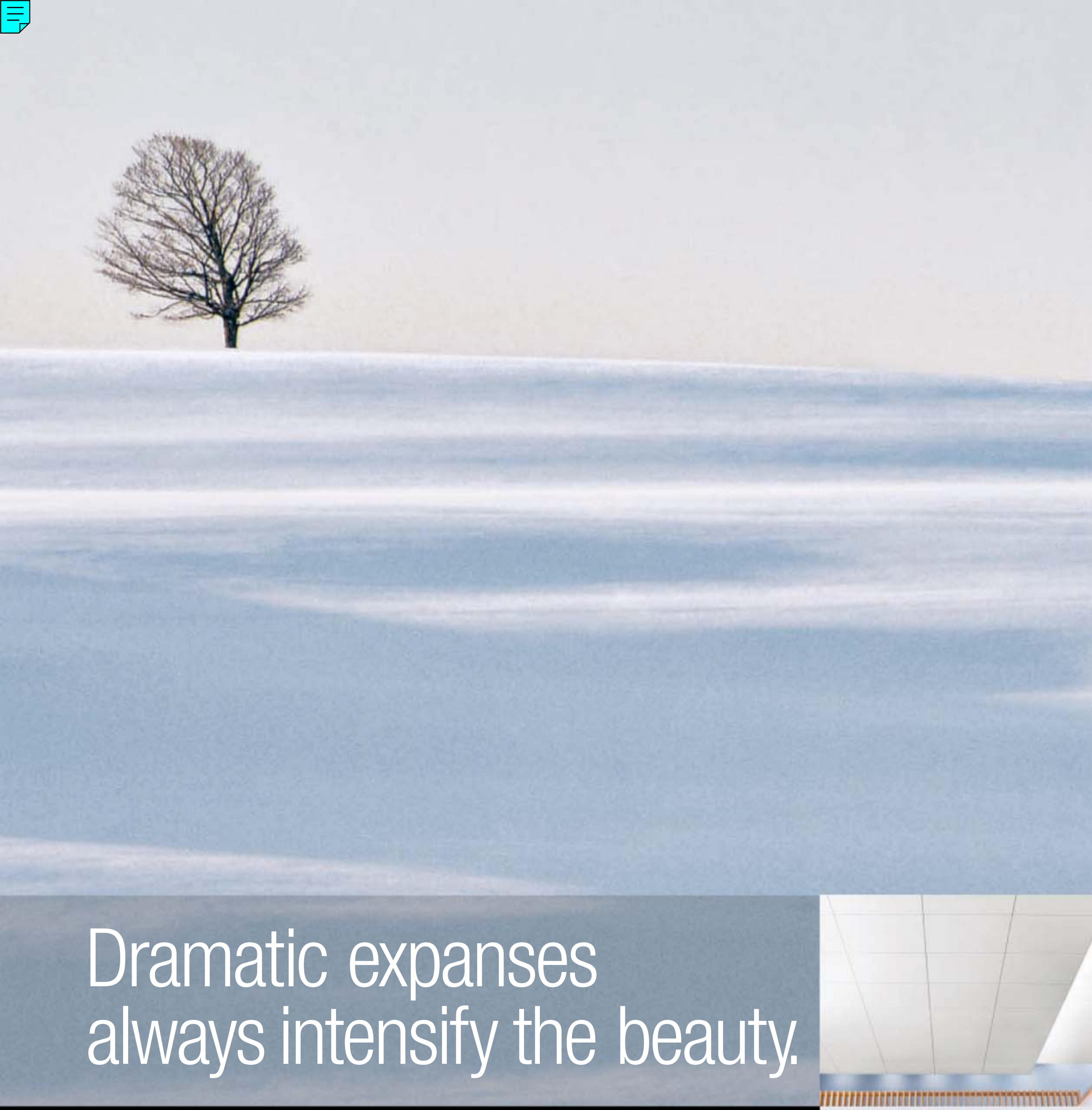

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After 20 years, Chattanooga finishes riverfront development

Nearly 20 years after initiating a master-planning process with Cambridge-based Hargreaves Associates, the City of Chattanooga, Tennessee, is completing its waterfront redevelopment. Culminating in a three-year push by Mayor Bob Corker, the final stage includes expansion of the Hunter Museum of American Art by Randall Stout Architects; an expansion of the Tennessee Aquarium by Chermayeff, Sollogub & Poole; a series of public-art projects; the redesign of a state highway into a pedestrian-friendly parkway; and the addition of housing and retail. “We’ve built on our greatest resources, which are our outdoor amenities and our natural topography,” says Todd Womack, communications director for the mayor’s office.

A bridge to the Hunter Museum of American Art (below), with the recent expansion visible at the left.

The redevelopment has helped transform central Chattanooga from an after-hours ghost town into a vibrant district, but only after some communitywide soul-searching. The city of just over 150,000 realized that its compact size and setting could make it unique, and now it is held up for its progressive planning and walkability. “We realized that we weren’t going to be a Nashville or an Atlanta,” says Womack.

The 129-acre waterfront redevelopment cost approximately $120 million, almost all of which was raised privately. Stout’s just-opened 28,000-square-foot addition to the Hunter Museum is the most architecturally adventurous piece of the redevelopment, with a curvilinear roofline and cliff-hugging form that contrasts with the symmetry of the museum’s original Beaux-Arts mansion building, perched above the riverfront. The addition to the Tennessee aquarium, by Chermayeff, Sollogub & Poole, is more restrained, while modern riverfront parks, designed by Hargreaves, add new green spaces, a pier, better shorelines, and revamped streetscapes. The entire redevelopment strategy relies more on good urban design than on iconic architecture.

“We’re building a city, not just a bunch of parks,” says Womack. *Alan G. Brake*

MVRDV wins first-ever Marcus Prize

Rotterdam-based MVRDV has been selected as the first winner of the Marcus Prize, a biannual award for emerging architects established by Milwaukee’s Marcus Corporation Foundation. The firm will receive $50,000, and an additional $50,000 will go to the University of Wisconsin-Milwaukee (UWM) School of Architecture and Urban Planning to administer the prize. Firm architects will act as guest critics at the school in spring 2006.

MVRDV was among 22 nominees from nine countries. “We really were looking for a person or group that was on a trajectory to greatness,” says Bob Greenstreet, who is dean of the school and city planner of Milwaukee. He helped organize the award.

Founded in 1991 by Winy Maas, Jacob van Rijs, and Nathalie de Vries, MVRDV’s work explores the relationship of density and place, especially in unique urban sites. Projects include the Dutch Pavilion for the World Exhibition 2000, and the Silodam housing complex, a multicolored cluster of buildings raised on stilts above Amsterdam’s IJ River. MVRDV was a finalist for the New York City 2012 Olympic Village and the BBC headquarters in London. “The sites that MVRDV has dealt with in postindustrial cities with waterfronts are very similar to locations in Milwaukee,” says Greenstreet, who hopes the firm will engage with his city’s building community. The Marcus Corporation Foundation is the philanthropic arm of The Marcus Corporation, which owns and operates movie theaters, resorts, and hotels throughout the U.S. ***John E. Czarnecki, Assoc. AIA***

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AIA recognizes top green projects

The AIA's annual contribution to Earth Day extended traditional categories, as the organization's Committee on the Environment (COTE) honored eight green building projects and for the first time recognized an urban plan. The institutional, residential, and civic projects address a broad range of environmental and social conditions without compromising on design, according to jury members.

The 2005 winners are the **Eastern Sierra Residence** in Gardnerville, Nevada, by Arkin Tilt Architects; the **Barn at Fallingwater** in Mill Run, Pennsylvania, by Bohlin Cywinski Jackson; **Rinker Hall at the University of Florida** in Gainesville, by Croxton Collaborative and Gould Evans; the **Pittsburgh Glass Center,** by Davis Gardner Gannon Pope Architecture and Bruce Lindsey; the **Austin Resource Center for the Homeless** in Texas, by LZT Architects; the **Evergreen State College Seminar II building** in Olympia, Washington, by Mahlum Architects; **Sarah Lawrence College's Monika A. and Charles A. Heimbold, Jr., Visual Arts Center** in Bronxville, New York, by Polshek Partnership Architects; and the **Leslie Shao-ming Sun Field Station** in Woodside, California, by Rob Wellington Quigley, FAIA. The committee also awarded a special commendation to the **Lloyd Crossing Sustainable Urban Design Plan** in Portland, Oregon, by Mithun Architects + Designers + Planners.

Selections reflect an expansive definition of environmental responsibility, including issues of equality and social responsibility, according to COTE chair Vivian Loftness, professor of architecture at Carnegie Mellon University. Among individual details, the jury appreciated LZT Architects' use of a water-storage tank as a sunshade for the Austin homeless shelter and Davis Gardner Gannon Pope and Bruce Lindsey's recycling of waste heat in the Pittsburgh Glass Center. *Ted Smalley Bowen*

LZT's Austin Resource Center for the Homeless.

Critics say National Trust helped doom St. Louis building

Critics of the National Trust for Historic Preservation say it supported the demolition of St. Louis's 108-year-old Century Building in order to save the city's Old Post Office Building. The Century, located across the street, was torn down to make room for a parking garage in February.

The Century before the wrecking ball.

The 10-story, marble-clad Century was promoted as "the only marble office building in the West" when built in 1896. In addition to offices, the Beaux-Arts structure also contained a 1600-seat theater. The Old Post Office, a National Historic Landmark that dates to the 1880s, had for years been considered for major renovation. After reviewing parking options, the post office's tenants and developers fixed on the Century Building site. In 2002, the National Trust Community Investment Corporation, a for-profit subsidiary of the trust, allocated an $8.7 million tax credit to the project.

The Landmarks Association of St. Louis, an independent landmarks advocacy organization, contends that, through that credit, the trust essentially funded the Century Building's demolition. It filed four lawsuits against the project before the Century Building demolition proceeded. "We were stunned and disappointed. The [trust] abdicated its role in preservation and sound planning," says Carolyn Hewes Toft, Hon. AIA, executive director of the association.

But the trust says it only helped fund the $45 million post office project. Before demolition of the Century, Richard Moe, president of the trust, said, "Demolition of the Century would be an unfortunate but necessary trade-off for the long-term benefit of the Old Post Office and its neighborhood." The Interior Department's designation of the Century to the National Register of Historic Places in October 2002 was not enough to stop demolition, and the parking structure is soon to be completed. *J.E.C.*

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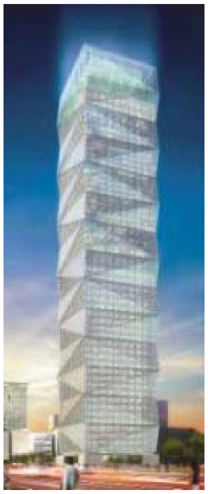
Debate over foreign architects' roles in China intensifies

With the foundations being laid for long-awaited Chinese projects such as OMA (Office for Metropolitan Architecture)'s CCTV headquarters, and with projects like Paul Andreu's Grand National Theater in Beijing reaching completion, the ongoing debate about the role of foreign architects in the country has come into sharper focus.

Chinese academics and architects have in recent years criticized the eagerness of their countrymen to hire Western architects—which, like OMA, are establishing Chinese offices at an increased pace—noting that most foreign projects lack deference to the Chinese vernacular and are designed by architects with little connection to China. The outcry seems to have also sparked a sense of nationalism and insecurity.

"[Chinese architects] suddenly see that their knowledge and architectural language, which they have inherited from their teachers and ancestors, isn't being put into use, and their role becomes subordinate," Ming Lu Gao, one of the 2004 Beijing Biennial's organizers, recently told *China Daily*, the state newspaper. Weiping Shao, chief architect of the Beijing Institute of Architecture and Design, notes, "Some local architects think [foreigners] bring good ideas to China and benefit the Chinese architectural market. But before, we had all the projects, and now we must share them."

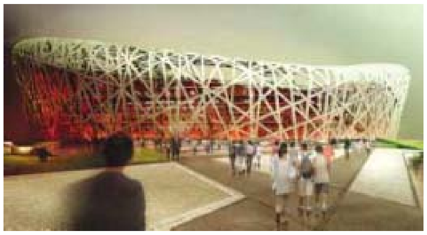


SOM's planned Jinao Tower in Nanjing.

Some of the most frequent complaints center on the projects now coming to fruition. Peigen Peng, professor of architecture at Beijing's Tsinghua University, has criticized CCTV headquarters as being too melodramatic for a city long known for its tranquil spaces and rectilinearity. The most disapproval, however, is reserved for Andreu's Opera House, a simple, curved pod-like form often accused of breaking from the disciplined order of its neighboring elements. "For Tiananmen Square, at that place, [buildings] should really be Chinese," comments Shao Fan, a rising Chinese designer.

Yet the foreign phenomenon is inevitable, says Yung Ho Chang, arguably Mainland China's most celebrated architect, who notes that the globalization of architecture is happening everywhere, not just in China. Chang himself is now working in South Korea and Japan.

Moreover, many agree that China does not have the resources to satisfy the demand for immense, innovative designs. "At the moment, the cutting edge is overseas," says Hong Kong's Rocco Yim, architect of the recently unveiled Guangdong Museum. Whether that will leave a positive imprint on China's traditional urban character (which Chang notes is quickly fading in the growing shadow of glass and steel) is an open question, he says. Adds OMA partner Ole Scheeren, "[China] is making enormous steps, and the natural situation is to look to the outside for help." *Daniel Elsea*



Herzog & de Meuron's Olympic Stadium plan.

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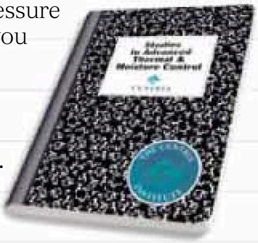

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Symposium finds Saarinen's reputation back on the upswing

If the overflow crowd that showed up for the Eero Saarinen symposium at the Yale School of Architecture in early April is any indication, the roller-coaster ride of Saarinen's reputation is on the way up again. Though he was "the acknowledged leader of the first generation of American Modernists," as the architectural historian Vincent Scully said in his keynote address, as few as 10 years after Saarinen's sudden death in 1961 he was rarely mentioned in the press or academia.

"Many of us never studied Saarinen's buildings in school," explained Yale professor Eeva-Liisa Pelkonen, who organized the symposium. The event was sparked by a gift from the successor firm, Kevin Roche John Dinkeloo and Associates, of 500 rolls of drawings and 100 boxes of miscellaneous material to the Yale University Library Department of Manuscripts and Archives. The newly available archive has encouraged a series of research projects, which were previewed at the symposium. They will be featured in an exhibition called *Eero Saarinen: Realizing an American Utopia* opening at the Museum of Finnish Architecture in Helsinki next year.

Donald Albrecht, who is curating the exhibition, talked about some of Saarinen's many high-profile clients. Several graced the cover of *Time* magazine, including GM president Harlow Curtice, Yale president A. Whitney Griswold, IBM chairman Thomas Watson, Jr., CBS president Frank Stanton, and the former head of the FAA, Najeeb Halaby, who was the client for Dulles Airport.

Scully's keynote address, in turn, helped explain why Saarinen was so soon forgotten. Scully began by admitting the "derisive comments" he had made at the time. "In the 1950s, when Saarinen, Louis Kahn, Philip Johnson, and Paul Rudolph were dramatically redefining the strategies of modern architecture, I earnestly thought that what was important was the direction Kahn, and later Robert Venturi, were taking. But today, a generation of architects liberated by the computer find Eero's work compelling. Eero is clearly much more complex, more directly concerned with human use and meaning than I thought he was." He added, "I can neither defend nor deny my remarks some 30 years ago, but I still feel a twinge of guilt."

Saarinen's TWA Terminal at JFK airport.

Architect Greg Lynn further explained why interest in Saarinen has resurfaced. Showing pictures of Saarinen's buildings paired with those of Asymptote, Foreign Office Architects, and Ben van Berkel, he explained, "The problems [Saarinen investigated] don't have to do with computers. They have to do with calculus and drawing with curves. Eero was trying to fuse things." Lynn also showed why the gift of the archive was important, noting that when he had gone to see the buildings in his youth, he couldn't see the drawings or models that would explain how they were built. *Jayne Merkel*

PHOTOGRAPHY: © CORBIS

With some acquisitions, it's hard to know who is ultimately the winner. For this one, might we suggest a mirror?

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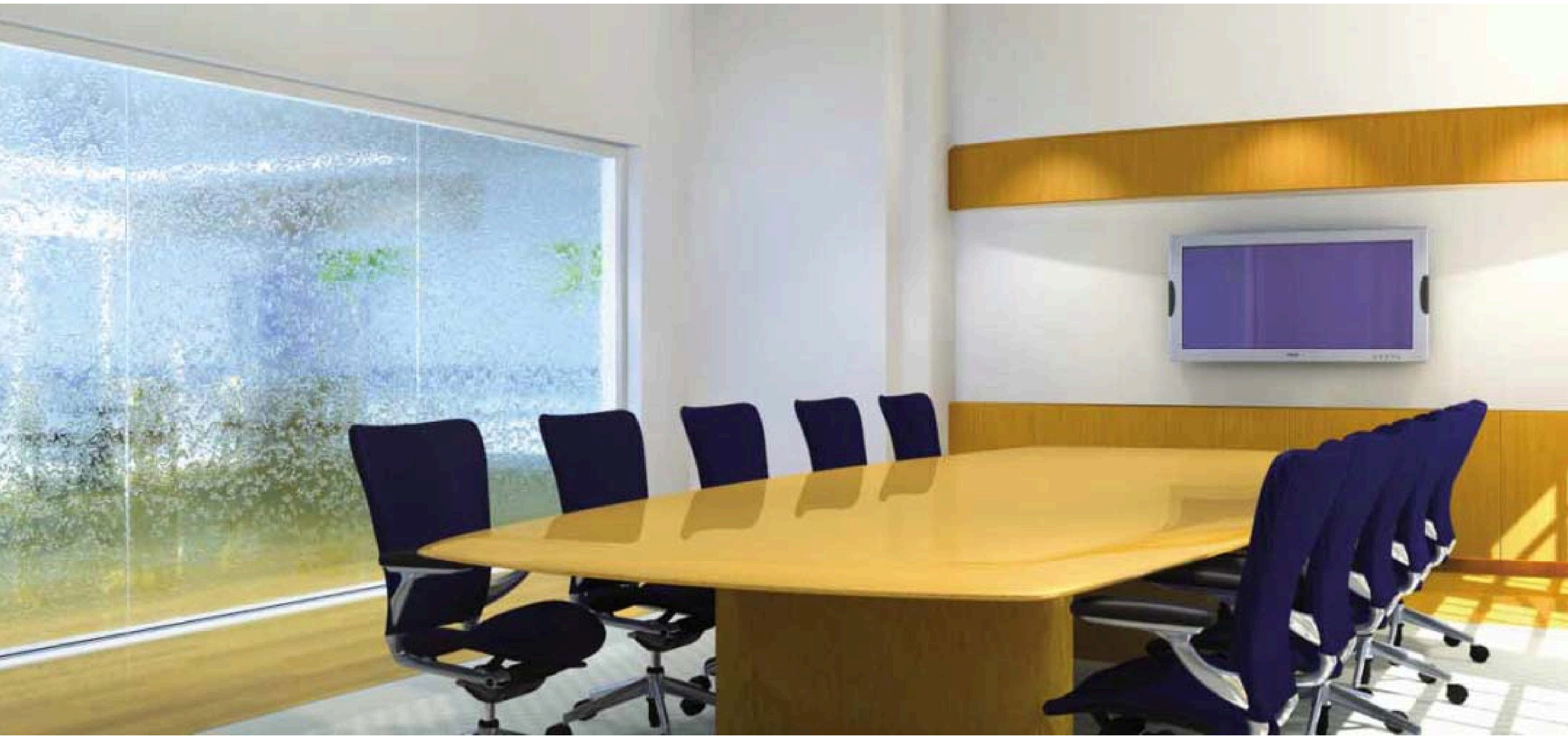

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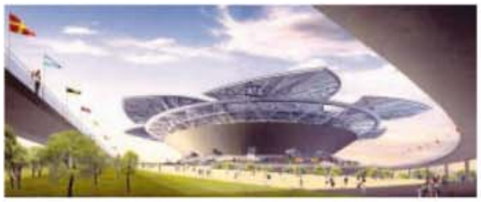
Ambitious new tennis complex for Shanghai



The Association of Tennis Professionals (ATP), tennis's governing body, has announced that the Qi Zhong Stadium (right), the first phase of a new $200 million tennis facility in Shanghai, will be completed in September. When the second phase of the project is concluded in 2006, the Qi Zhong Tennis Center will be bigger than Melbourne Park, currently the largest tennis facility in the Asia Pacific region.

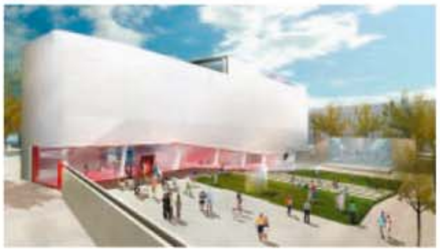
The main tennis stadium, with a capacity for 15,000 spectators, will feature a unique retractable roof soaring 130 feet high in the shape of an eight-piece magnolia. Each of the eight pieces of the roof will rotate when it opens, so that from above, it resembles petals on a symmetrical flower.

The project is being designed and built by a Chinese team, including the Xian Dai Architectural Design Company, the China Construction Third Bureau, Jiangnan Heavy Industry Company, and the Shanghai Mechanical Construction Company, which is responsible for the roof.

Located about 18 miles southwest of Shanghai, the 80-acre facility will host the Tennis Masters Cup for three years, starting with the November 2005 tournament. In addition to the main stadium, the facility will feature 40 indoor and outdoor courts, including a smaller, 8,000-seat stadium. *Jen Lin-Liu*

Updated film museum will be fit for projection

The Museum of the Moving Image in Astoria, Queens, recently unveiled plans for an expansion and renovation (below) by Brooklyn-based Leeser Architecture. The project will nearly double the museum's current size, to 96,000 square feet, including new screening areas, an outdoor amphitheater, new galleries and storage, and new entrance and circulation spaces.



Virtually every surface in the addition will include moving images. Screens covering the elevators will simulcast pictures of museum occupants. The exterior will be clad by a thin metal scrim, providing another projection surface and blocking light into the galleries and theaters. Interior volumes, also set as screening spaces, will be formed by taking a continuous white plane, which architect Thomas Leeser likens to a film strip, and folding it up or down.

Many spaces will perform varied functions. Ramped galleries will serve as theaters and as vertical circulation areas, and a large multipurpose space will act as a lunchroom for school children and as a formal reception room.

Erected in 1920, the museum's building was once part of Paramount Pictures' studio system. Gwathmey Siegel redesigned the space when the museum opened in 1988. Construction on the $25 million expansion will begin this summer and last until 2008. *James Murdock*

IMAGES: COURTESY ASSOCIATION OF TENNIS PROFESSIONALS (TOP); MUSEUM OF THE MOVING IMAGE (BOTTOM)

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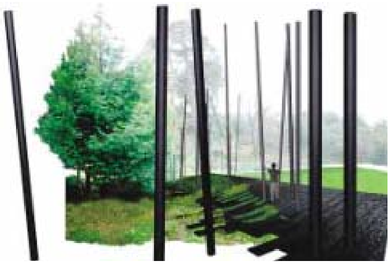
News Briefs

AIDS Memorial Grove getting new element The simple title "Living Memorial" belies the disturbing yet elegant landscape element for the National AIDS Memorial Grove in San Francisco's Golden Gate Park. Submitted by New York–based architects Janette Kim and Chloe Town, the winning project, chosen from more than 200 entries, sets up a jarring counterpoint to the lush green swale of the Grove, whose development has been ongoing since 1991. Evoking forest fires to underscore AIDS's devastation, a swath of the Grove will be lined by a fire-blackened wooden berm and occupied by a field of 24-foot-high black-carbon-fiber rods. Visitors can view the piece from a charred wooden platform, while benches made of wood recovered from forest fires provide repose. The rods, mirrored at their tips to reflect the sun, "serve as reminders of how many people have lost someone," explains Town. *Lisa Findley*

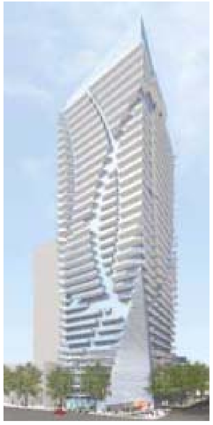


Carbon-fiber rods will line the Grove.

Libeskind's Sacramento building likened to Freedom Tower A new condominium tower in Sacramento, California, promises to add a distinct, but perhaps vaguely familiar, signature to the city skyline.

The 37-floor Aura, designed by Daniel Libeskind, has received criticism because of the sloping-roofed building's similarities to Libeskind's original tower designs for the World Trade Center site. Yama Karim, project architect, explains that any similar traits are driven by site conditions. All would be tall, slender towers that minimize shadows, allowing for maximum sunlight and views. Karim notes that Aura is constructed of concrete and glass (Libeskind's towers were steel and glass), while the facades, reflecting different uses—Aura, for instance will have residential balconies—are completely unalike.

Karim says that Aura will later be joined by two larger, much different towers. *Allison Milionis*



Too reminiscent of the Freedom Tower?

IMAGES: COURTESY JANETTE KIM AND CHLOE TOWN (LEFT); STUDIO DANIEL LIBESKIND (RIGHT)

HOK designing new Washington, D.C., baseball park HOK Sport of Kansas City, Missouri, has been chosen to design a stadium for the new Washington, D.C., Nationals. On March 31, the D.C. Sports and Entertainment Commission chose HOK Sport, the lowest bidder by $4 million.

Some claim that the selection process, which did not include design presentations, was driven primarily by Major League Baseball's desire to ensure that a well-functioning stadium opens in 2008, within a $535 million budget. HOK Sport, designer of 10 of the last 14 Major League stadiums, was favored from the start.

"The choice was made on expertise," says Joe Spear, AIA, HOK Sport principal. He says he has "no specific design ideas yet," but will collaborate with local architects Devereaux & Purnell and city officials to find the best solutions. The commission, he says, "wants something different from everything we've done in the past. They think the stadium should be a Washington

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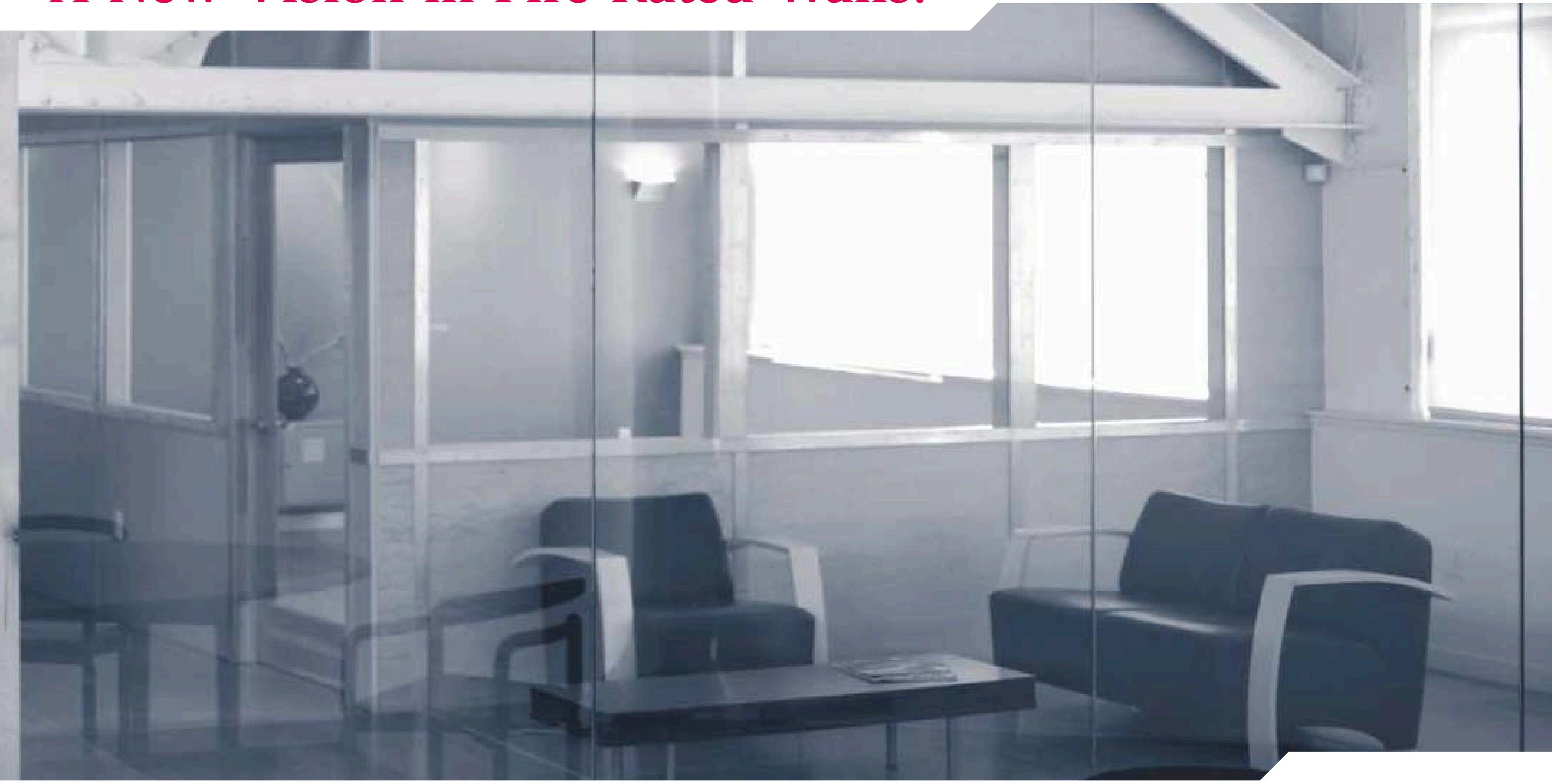
A New Vision in Fire Rated Walls.



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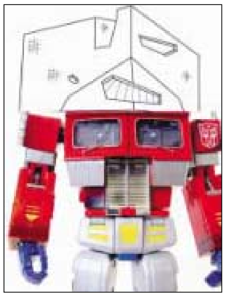
icon." *Andrea Oppenheimer Dean*

Scholarship fund will help cover registration costs To help individuals cover the $981 cost of taking the Architect Registration Exam (ARE), the National Associates Committee of the AIA has established the Jason Pettigrew Memorial ARE Scholarship Fund. The scholarship is named in honor of Jason Pettigrew, Assoc. AIA, of Colorado, who was a member of the initial National Associates Committee in 2001. Pettigrew died last July at age 29 in a mountain-climbing accident. He was working for Denver's SlaterPaull Architects and was in the process of taking the ARE at the time of his death. Contributions are now being accepted to build the fund's initial endowment. The AIA's goal is to provide at least one scholarship annually from the endowment. *J.E.C.*

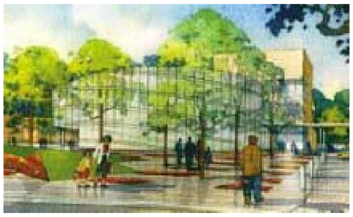
Contest lampoons Walker Art Center Poking fun at Herzog & de Meuron's just-opened Walker Art Center expansion, Minneapolis underground newspaper *Citypages* and its Web site, citypages.com, recently hosted a contest called "What the Hell Does the Walker Look Like?" The competition challenged readers to draw sketches of what the much-praised but odd-looking museum resembles. Top prizes, awarded by the Walker itself, included dinner at the museum's restaurant and gallery passes. Entries depicted the Walker as Elvis, Darth Vader, a Transformer, a climbing wall, and a lunchbox, to name a few. "It's a really rich arts community," says Corey Anderson, online managing editor at citypages.com, who organized the contest. "I couldn't wait to see what people cooked up." *S.L.*



Walker contest entries depict the museum as Darth Vader (above) and a Transformer (right).

IMAGES: COURTESY CITYPAGES.COM (LEFT TWO); ROBERT A.M. STERN ARCHITECTS (RIGHT)

Four partners leave Chong Partners Four senior partners at one of San Francisco's largest and most respected firms, Chong Partners Architecture, are leaving to form their own practice. The firm, founded by former AIA president Gordon H. Chong, AIA, is well-known for its health-care and education work. Former partners Jeff Warner, John Ruffo, Sam Nunes, and Bryan Shiles, after trying for years to come to an agreement with Chong over a transition plan for the firm, launched their new practice, WRNS Studio, in early May. Chong Partners, founded in 1978, continues with 180 employees, 65 of them architects. *L.F.*



Stern's planned Quilt Study Center.

Quilt center in the works Robert A.M. Stern Architects is designing the International Quilt Study Center for the University of Nebraska. The unique museum, which will sit within a fabric-inspired pattern of pavers, will be made of limestone and have a bowed-glazed facade composed of glass panels "stitched together" to create a quilting pattern. Opening is scheduled for fall 2007. *S.L.*

ENDNOTES

- Norman Kurtz, chairman of the engineering firm Flack + Kurtz, died on May 13 at the age of 69.
- Office For Metropolitan Architecture (OMA) and Gruen Associates have been selected to design the California Institute of Technology's new Walter and Leonore Annenberg Center for Information Sciences and Technology in Pasadena.
- David Thorman, AIA, has been named California State Architect.

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For and about
the emerging architect

archrecord2

In Los Angeles, even the weather can seem stage-managed—so it's no surprise that the creative community flourishes there, whether because of or in spite of this. Architects in the City of Angels have always prided themselves on challenging norms, and the firm we profile in **Design**, null.lab, is no different. We jet off to Denmark in **Work** to see what happens when young artists from cities as far-flung as Beijing and Brussels are given a hotel to redesign.

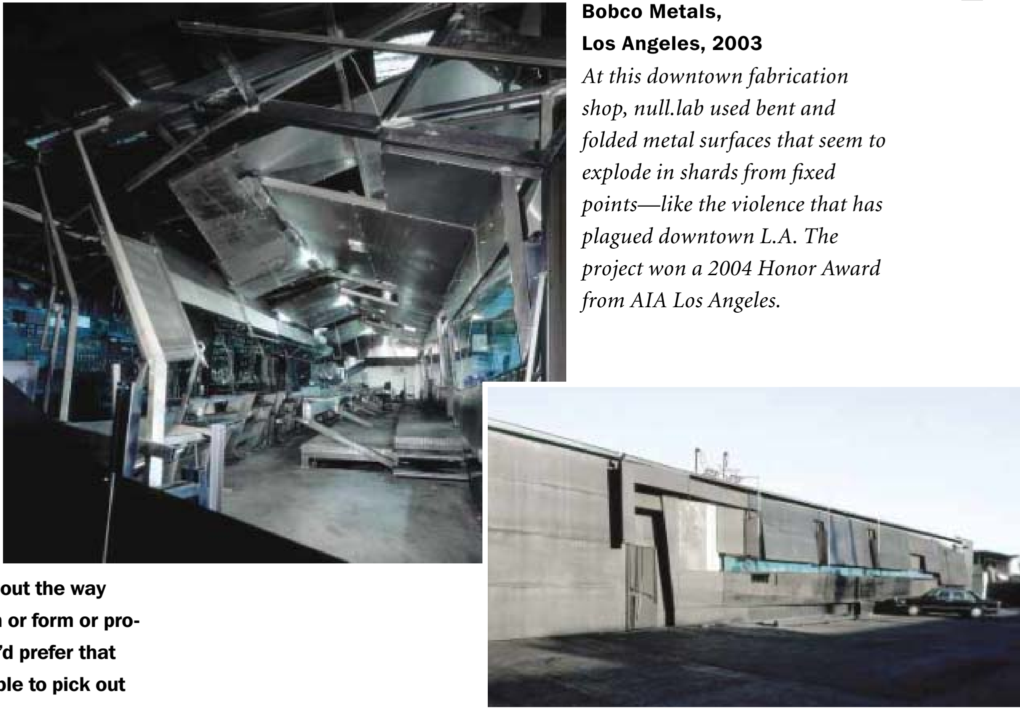
Design

A firm called null explores the unknown

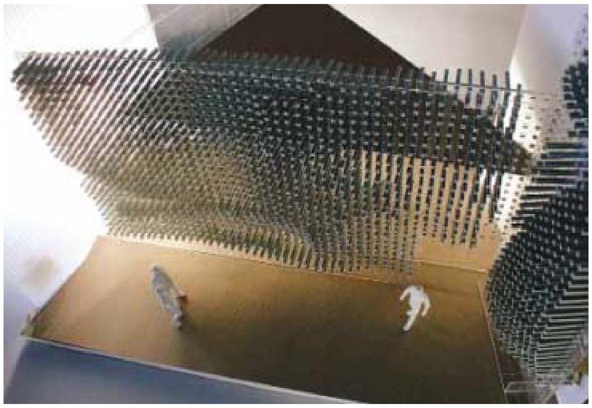
The founders of Los Angeles–based null.lab, Arshia and Reza (left and far left—and yes, they go only by their first names), adopted the firm's name because it's both specific and vague—in other words, slightly dysfunctional. "A lab is obviously a place of experimentation, where the process is valued as much as the result," says Arshia. The concept of null, he adds, indicates not so much "nothing" as the unknown. Perhaps that hints at the undefined territory he and Reza explore when they begin each project, but that's one of many possible interpretations. They'd prefer to let us draw our own inferences.

This open-ended approach is reflected in their design philosophy, which could bear the tagline "Against Functionalism." Arshia says, "In architecture there's a bias about the way space is used—that use should be predetermined by function or form or program. We want to defunctionalize architecture in this way. We'd prefer that people engage with our projects like natural spaces—to be able to pick out where they're most comfortable doing various things, whether it's sitting or working or reading, as they would in a park." Reza also cites natural systems as a model. "We want to design in the same manner that nature generates life—DNA, for instance, has the same structure but results in very different-looking organisms. We're interested in creating complex spaces generated by simple, straightforward rules." They think of themselves as makers of space rather than architects, a term they find too restrictive; both have dabbled in—and are fascinated by—film and new media.

The partners knew each other for several years before forming null.lab in 2002. Both were born in Iran. Arshia, who lived in Baltimore briefly as a child in the 1970s, studied architecture at Shahid Beheshti University in Tehran and practiced there afterward, designing commercial and residential projects and winning awards for both built and unbuilt work. Reza, whose family

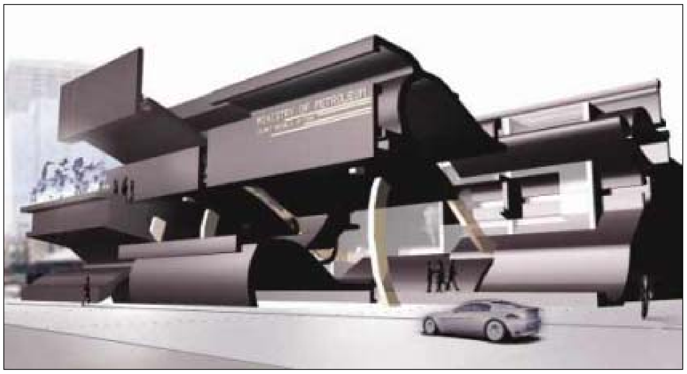


Bobco Metals,
Los Angeles, 2003
At this downtown fabrication shop, null.lab used bent and folded metal surfaces that seem to explode in shards from fixed points—like the violence that has plagued downtown L.A. The project won a 2004 Honor Award from AIA Los Angeles.



Sunset Landmark Building,
West Hollywood, 2005
null.lab is designing a 1,200-square-foot interactive LED installation at a prominent site next to the House of Blues on Sunset Strip. The project would commemorate the 20th anniversary of the establishment of West Hollywood as a city independent of Los Angeles.

IMAGES: COURTESY NULL.LAB (PORTRAITS AND BOTTOM); © BENNY CHAN/L.A. FOTOWORKS (TOP TWO)

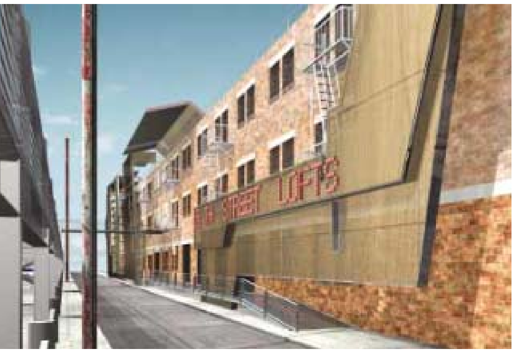


Ministry of Petroleum Headquarters, Tehran, Iran, competition entry, 2002
The ministry hosted a competition for a monumental building. Arshia and Reza imagined a complex system of spaces for meetings, conferences, and offices. The headquarters was never built.

moved to Columbus, Ohio, when he was 10, earned his degree at SCI-Arc in 1991 and spent much of the next decade working for a who's-who list of Los Angeles architects: Frank Gehry, Thom Mayne, Eric Owen Moss. He and Arshia met in Tehran in the mid-1990s, where Arshia was working for Shirdel/Kipnis as a project architect for the Tehran International Airport, and Reza was employed briefly as a form-maker. When Arshia moved to Los Angeles in 1997, they reconnected, even working together a few times for Michele Saee and others. Now they work side by side at a few makeshift, poorly lit work tables in a huge, raw loft space near SCI-Arc, which seems more 1970s SoHo than City of Angels.

Though Arshia and Reza describe null.lab as a nontraditional firm, that doesn't seem to be scaring away clients. In fact, their projects downtown and on Sunset Strip involve some of L.A.'s top developers and planners. If the recent honor award from AIA Los Angeles for Bobco Metals (see previous page) is any indication, null.lab seems poised to become a stalwart of an emerging generation of avant-garde designers in a city that has always attracted iconoclasts. The unknown, after all, holds infinite possibilities. *Deborah Snoonian, P.E.*

For more photos and projects by null.lab, go to architecturalrecord.com/archrecord2



15th Street Lofts, Los Angeles, 2005
Developer Western Imperial tapped null.lab to create 99 loft-style apartments in a 1920s brick building downtown. The architects are transforming the facade with active signage and perforated metal.

Work

Rooms serviced: artists redesign a nondescript hotel

Thanks to a clever publicity campaign by automotive giant Volkswagen, design-conscious travelers now have an artful place to stay in the heart of Copenhagen.

As part of a promotional scheme entitled "Project Fox" for the new VW Fox vehicle, the company invited 21 young artists from around the globe to make over the rooms at the Brøchner Hotel in Copenhagen, one of a Danish chain by the same name. Given four months to complete what was dubbed "Hotel Fox," the group of illustrators, graphic designers, and artists responded enthusiastically, changing the furniture, carpets, and wallpaper in 61 rooms to suit their fancy. The result is as varied as their creators' backgrounds. One room resembles the interior of a log cabin in the hills of Switzerland; another is stark and spare, with letters that seem typed onto the walls; a third boasts a lush textile backdrop replete with fanciful woodland creatures.

Volkswagen officials say they launched the campaign in early 2005 both to promote the VW Fox and to showcase emerging talent in a variety of creative fields (the company also sponsored events for rising-star chefs and hotel managers). After a three-week media frenzy at the Hotel Fox in Copenhagen, the journalists and artists have all gone home—but happily, anyone can now stay in the redesigned rooms. *Randi Greenberg*

See more redesigned rooms at the Hotel Fox by visiting archrecord.construction.com/archrecord2/

Examples of the 61 unique rooms at Hotel Fox, which were redesigned by an international group of young artists (clockwise from above): Kinpro/Japan; Antoine et Manuel/France; Speto/Brazil; Friends With You/USA.

IMAGES: COURTESY NULL.LAB (TOP TWO); PROJECT FOX (BOTTOM FOUR)

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Architecture as symbol generates a hot debate among our critics

Critique

By Michael Sorkin

*Editor's note: In his most recent Critique [*RECORD*, April 2005, page 101], Robert Campbell criticized former MIT president Chuck Vest for saying that buildings at the school "should stand as a metaphor for the ingenuity at work inside them." Michael Sorkin responds.*

Dear Bob,

I've just returned from a weekend at MIT, my first extended visit in years: had a good look around, saw new buildings, met old colleagues. I also happened to read your column while I was there, and I couldn't disagree with you more.

To begin with, why this anxiety with the idea of the metaphorical or, more properly, symbolic role of architecture? Do you really believe that architecture should be purged of directed meanings? Do you think that Chartres Cathedral makes a mistake in its heavenward aspiration and iconographic encrustation? Do you wish that the Einstein Tower were just a little more generic? That Legal Seafood should leave portholes alone? Indeed, do you really think that the domes, stairs, and Classical columns of Welles Bosworth's designs for MIT are simply a neutral "brown" wrapper because they're a bit more butch than the Pantheon?

Clearly, you don't. You describe this architecture as "denotative" of the "commonality of the present and the past," and, presumably, of strength and tradition, civic consequence, ruling-class solidarity, and deep roots in the Western canon. Your cavil seems to be not with the idea of symbolic content, but with the expressive particulars of those new buildings, their message. But why shouldn't MIT—the virtual Vatican of ingenuity—seek to express itself through works of architecture that are themselves formally and technically ingenious? Reading between the lines, I suspect the issue might grow from a fantasy of the apt modesty of the technical mind and its disdain for flamboyance. We like our scientists with chalk on their pants and elbows poking through their sleeves. Many liked the tumbledown, temporary Building 20, a wooden barracks dating from the Second World War, better than its expensive and formally elaborate successor [Gehry's Stata Center], just as most of us prefer the studiously casual uniforms of the American general staff of the same era to the drag-queen outfits of the Germans.

Aspirational architecture

In fact, both styles are rich in meaning—equally, if dissimilarly, connotative of attitudes to hierarchy, tradition, and warfare—distilling the difference between Germanic *Soldatentum* and what had been our own reluctance to militarize (talk about nostalgia!). One might question either message, but not their mechanism: Taste can be bad, but not wrong, certainly not in terms of a logical category like fallacy. Chuck Vest, who was president of MIT when you quoted him, was certainly within bounds to express his hopes for the university he directed in aspirational terms: His call for ingenious architecture was surely just another way of describing a desire for "great" buildings on campus.

Frank Gehry designed the Stata Center corridors as interior streets.

True, symbolism can be craven and dopey, and there are plenty of instances of poor and misleading translations of meaning into architecture. The Dr. Evil pinkie sticking up from the Freedom Tower to evoke a huge but expressively shriveled Statue of Liberty. The green roof on the Ford Rouge plant, a good idea transformed into a monument to craven hypocrisy and camouflage for the environmentally nefarious product being produced underneath it. And yes, we do seem to prefer the billowy, choose-your-own-metaphor abstraction of Gehry's undulating period to more literal ducks.

But hey, de gustibus! I think you most misread the new buildings not in iconic but in performative terms. You favorably contrast the original MIT complex with the new additions by calling it "corridor positive." This is

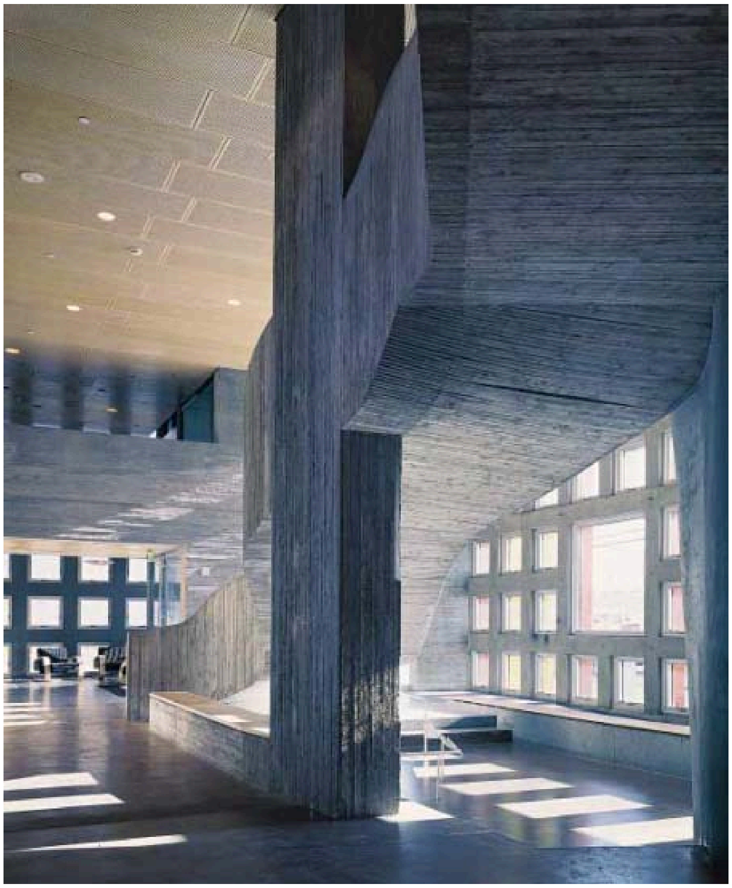
Contributing editor Michael Sorkin is the director of the urban design program at the City College of New York.

PHOTOGRAPHY: © ROLAND HALBE

a nice observation, one that foregrounds the importance of the network to the meaning of the campus. But both Stata and [Steven Holl's] Simmons Hall are extremely corridor positive, each making a serious effort to expand the meaning and content of the corridor. This is something of a tradition at MIT, where Aalto's Baker House—the greatest building on campus, indeed in Cambridge—offers that glorious straight-run stair, a rising corridor that functions as a social condenser and a sublime means of ascent.

The same effort to extend the corridor to a role beyond horizontal circulation is clear at Simmons in places where the "corridor" ascends through those troglodyte multistory common spaces, allowing residents to overcome the limits of floor-based affinities by producing a more three-dimensional space of interaction (and the kids love it!). Stata is structured around a complex interior street, extending the idea of the corridor to embrace a variety of forms and functions and initiating a complex (but surprisingly clear) system of circulation. This produces a more irregular, "medieval" pattern with a capacity to generate spaces of accident and encounter, substantially exceeding the grid scheme of the Bosworth buildings. While the old buildings provide a wonderful network of flows, the uniformity of their section yields little opportunity for repose.

Your remark that most people prefer loft spaces to "audacious metaphors" suggests that flexibility grows from generality, from providing a setup for the "equipotentiality" of subdivision. But flexibility can also be the outcome of assembly, and this is surely the message of both the larger aggregation of the MIT campus and the collage that underlies the elegant plan and complex section of Stata.



At Simmons Hall, Steven Holl tried to expand the meaning of the corridor.

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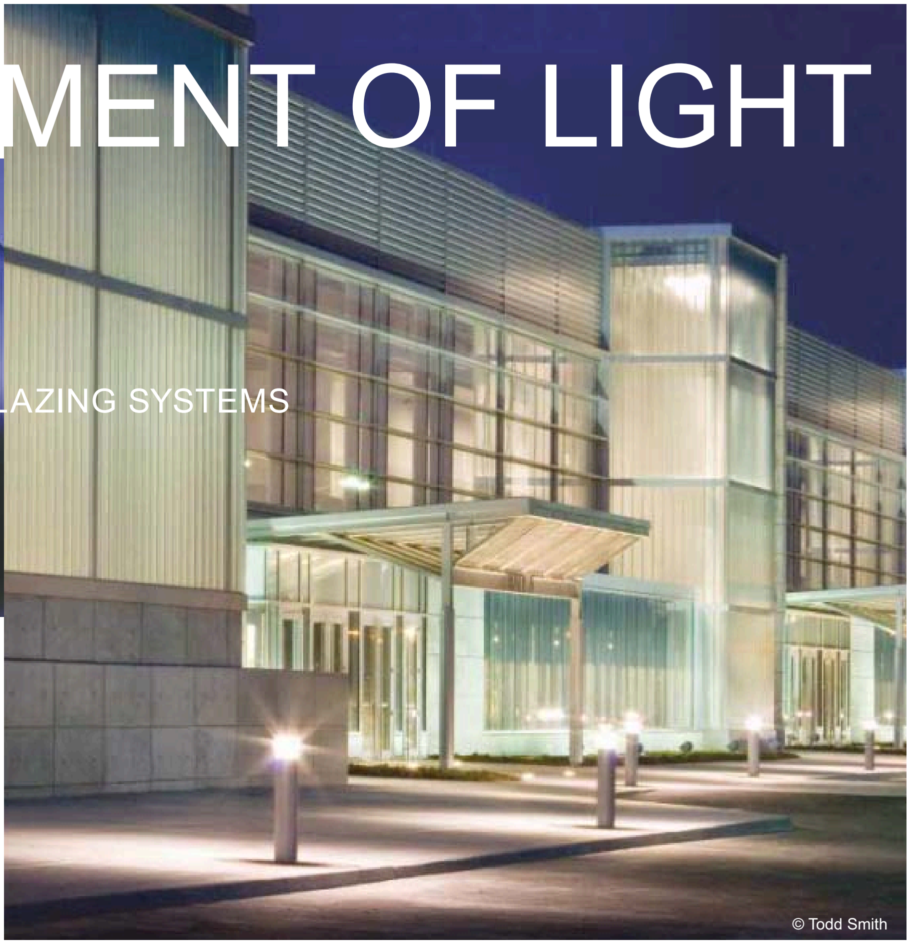

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THE BRAIN SEEMS A MORE INTERESTING MODEL THAN THE FACTORY FOR BUILDINGS IN OUR VIRTUAL AGE.

Here, malleability is the by-product of variety rather than uniformity, and the success of the strategy can be read in the almost insane variety of uses—from classes in philosophy to studios for guided-missile design—the building houses. At Stata, a change of use requires the search for an appropriate space or series of spaces rather than the serial redesign of big rooms. And to cite another happy paradigm, the building's design has strong affinities with the near-neural patterning of the Oxbridge model, with its engagingly wiggled eccentricities. Indeed, the brain seems a more interesting model than the factory for this virtual age. And this sort of labyrinth, you are right to observe, has nothing to do with the style of the hat that keeps the gray matter warm.

Finally, what's this about the lack of an iconic outdoor space? While the MIT campus doesn't congeal into a singular, instantly legible space like Harvard Yard or the Piazza Navona, it has a particularly urban quality, with elaborate networking and extensive distribution of common spaces. This parti produces both rich connections and strong set pieces. Among the latter are the plaza that joins Eduardo Catalano's student center and the two beautiful Eero Saarinen buildings, Bosworth's great lawn on the Charles, the space that flows around I.M. Pei's Green Building, and the emerging Vassar Street corridor. While these may not evoke the pastoral feelings of privilege and prestige that crossing the Yard on a crisp winter morning inspire, to say that these spaces play "little role in the life of the inhabitants" is simply wrong. The network, with its animating diversity, is both iconic and rich in terms of use and interaction. The greatness of this campus is the result of a stimulating collision of paradigms, not the domination by one.

How the campus progresses from a formal central core to a series of peripheral dissolutions has long been the critical issue for expansion, whether into the mixed-scale industrial and residential surroundings to the west and south or the burgeoning high-tech theme park to the east and north. The MIT campus is so remarkably urbane, in large part because it is formed in reaction to the unpredictable and unfolding complexity of its surroundings. I find these diverse interactions far more stimulating than, for example, the megalomaniac uniformity that is likely to result from Harvard's expansion into Allston.

Funny that your concluding quip about typography so directly evokes Victor Hugo's claim that the book had become the assassin of the public iconographic meaning of architecture. Setting aside the history of manuscript illumination and expressive typography (I assume the "modern" sans-serif face used in RECORD does not dissolve your intended meanings), I believe you founder on the old *langue/parole* distinction, among others. The question of expression does not ultimately devolve on typography, but on your writing, the real medium for the expression of your ideas. Sloppy execution by the contractor—like garish letterforms—can harm architectural expression, but it isn't the source of the problem any more than Chuck Vest's metaphor of ingenuity is for what's going on architecturally in those projects you so dislike.

By the way, do you wear a tux when the event calls for black tie? Do you find that people take your ideas more seriously if you do? Do you have more fun? ■

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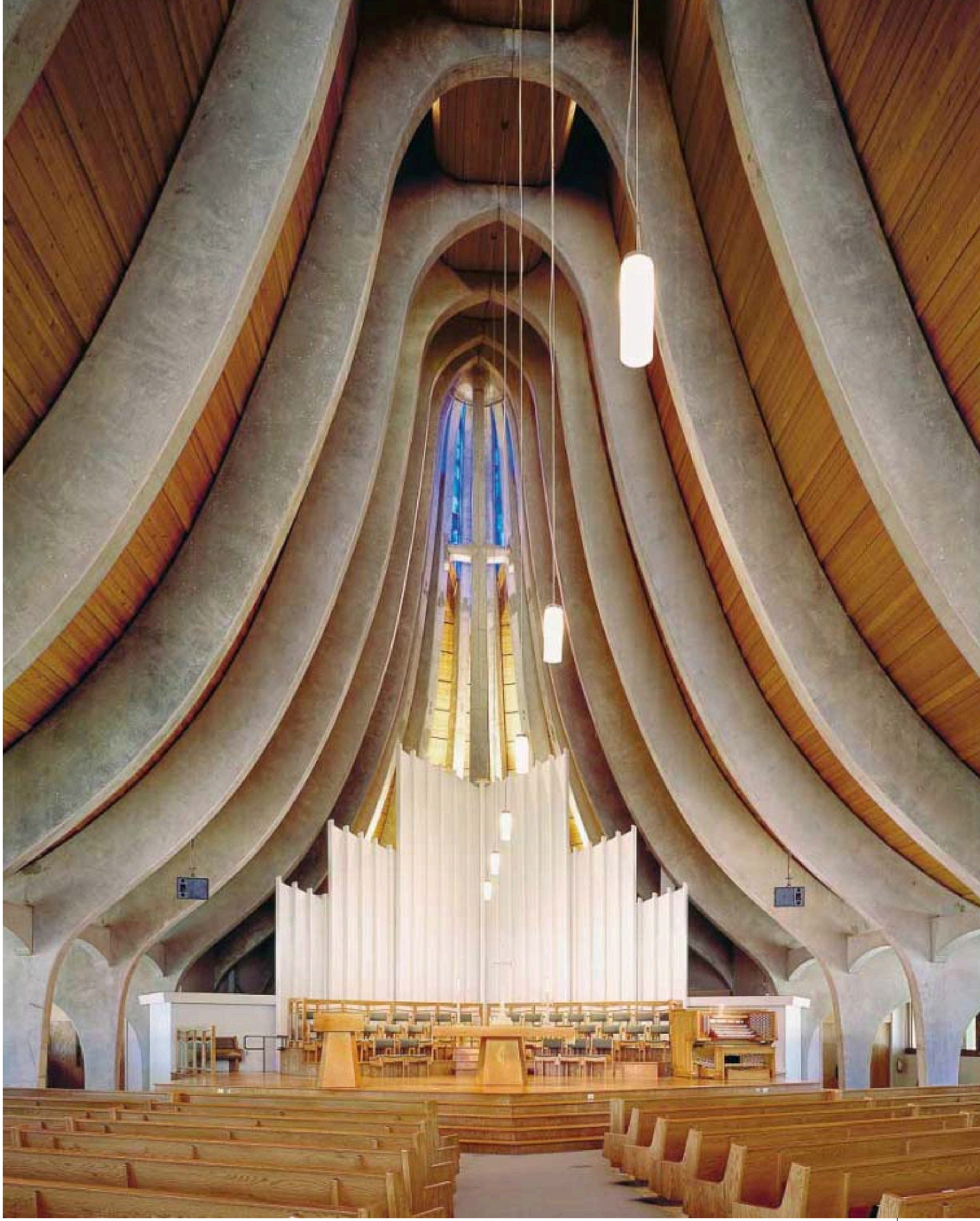
Snapshot



PHOTOGRAPHY: © BOB CANFIELD, EXCEPT AS NOTED

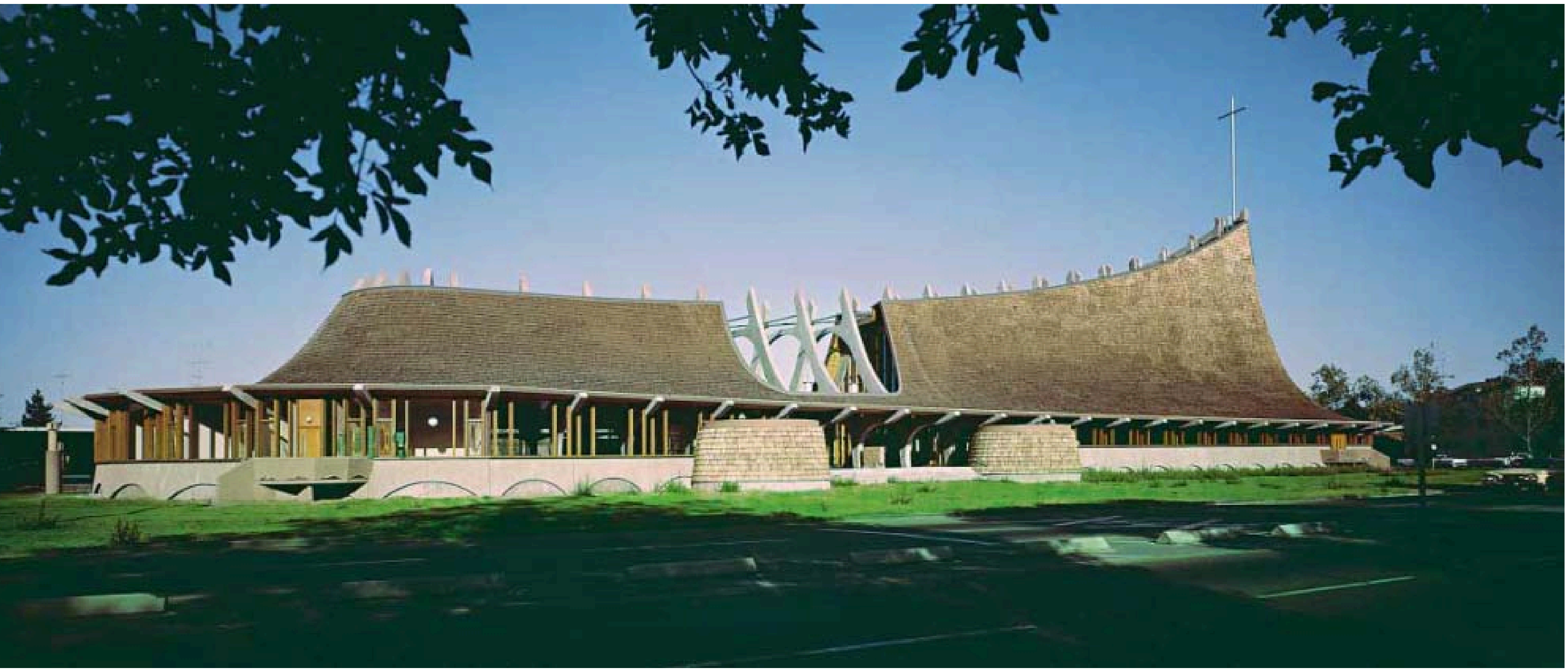
By Beth Broome

Worshiping in the modern spirit of a bygone era

From the moment it was completed in 1964, the Central Methodist Church made its mark as a modern icon in California's flat Central Valley. Today, 41 years later, the Stockton church is still a landmark. While some have come to refer to it as "the beached whale," love for the building has only grown in the heart of the congregation.

Central Methodist first approached San Francisco–based architects Anshen+Allen after seeing the firm's Chapel of the Holy Cross in Sedona, Arizona. The church was looking for a design marked by simplicity that would express its social as well as spiritual community, says Derek Parker, the project designer. Fifty-seven concrete bents cast on-site in the same shape at different heights form the building's frame. Rising to 85 feet at the chancel, the roof, made of heavy planking with thick redwood shakes, swoops down into overhanging eaves that shield the structure from the California sun. Fellowship hall, kitchen, and administration areas are on one side of the open-air atrium; the sanctuary, on the other.

More than 35 years later, the church once again approached Anshen+Allen. The ravages of time and the need

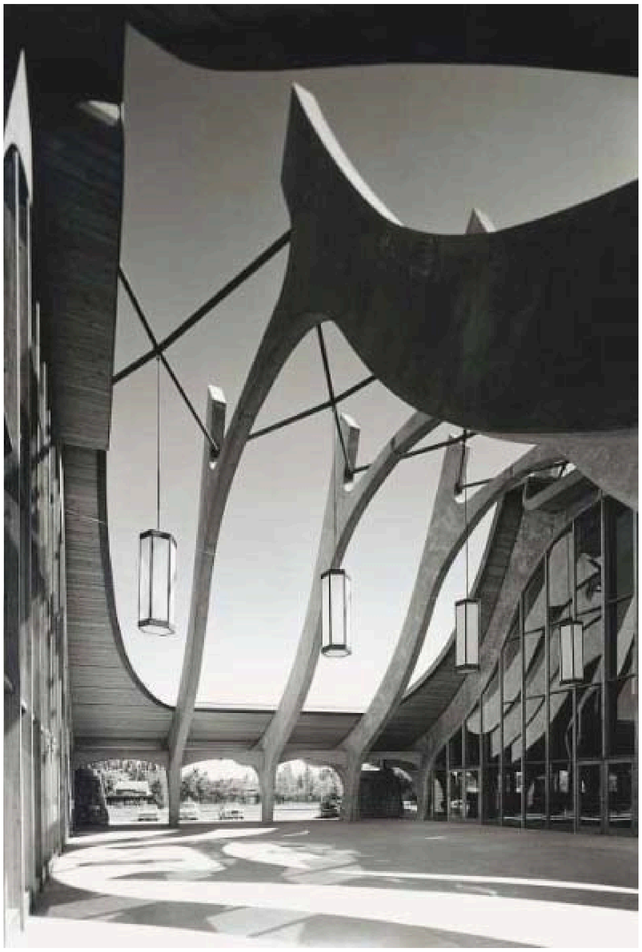


As it did when it was new, Central Methodist Church continues to inspire awe. The church as it appears today (above), and the open-air entrance in the 1960s (right).

for updating called for an intervention. By now, the firm, previously known for its Eichler homes and contemporary churches, had shifted its focus to larger-scale academic and health-care projects. Nonetheless, it embarked on a two-phase renovation plan. While a relationship that extends over such a long period is rare, Felicia Borkovi, principal in charge of the renovation, says, "Involving the architect of record is key to getting an intervention that works with the original architectural design intent."

Both client and architect agreed on the importance of leaving the design itself mostly untouched while replacing the roof, updating the lighting, acoustics, and mechanical systems, and allowing for ADA accessibility. Steps were also taken to address the changed needs of the much-reduced congregation, and to reach out to the younger generation by making the church experience more entertainment oriented. Pews were removed and spaced out to reduce capacity by a third, the chancel was raised to increase visibility for a 100-person choir, and a lighting system with preprogrammed color-combination settings was installed. A smaller organ was moved onto the stage, which obviated the need for a very tall screen to conceal unsightly organ pipes behind the altar, exposing the stained-glass window beyond.

The extended collaboration proved a positive experience for both client and architect, allowing the congregation to respectfully bring the church into the present day and the designers to continue the work begun so long ago. "Your involvement as an architect is only as good as the vision of your client," says Borkovi. "And here was a client that understood that this building is more than just a church." ■



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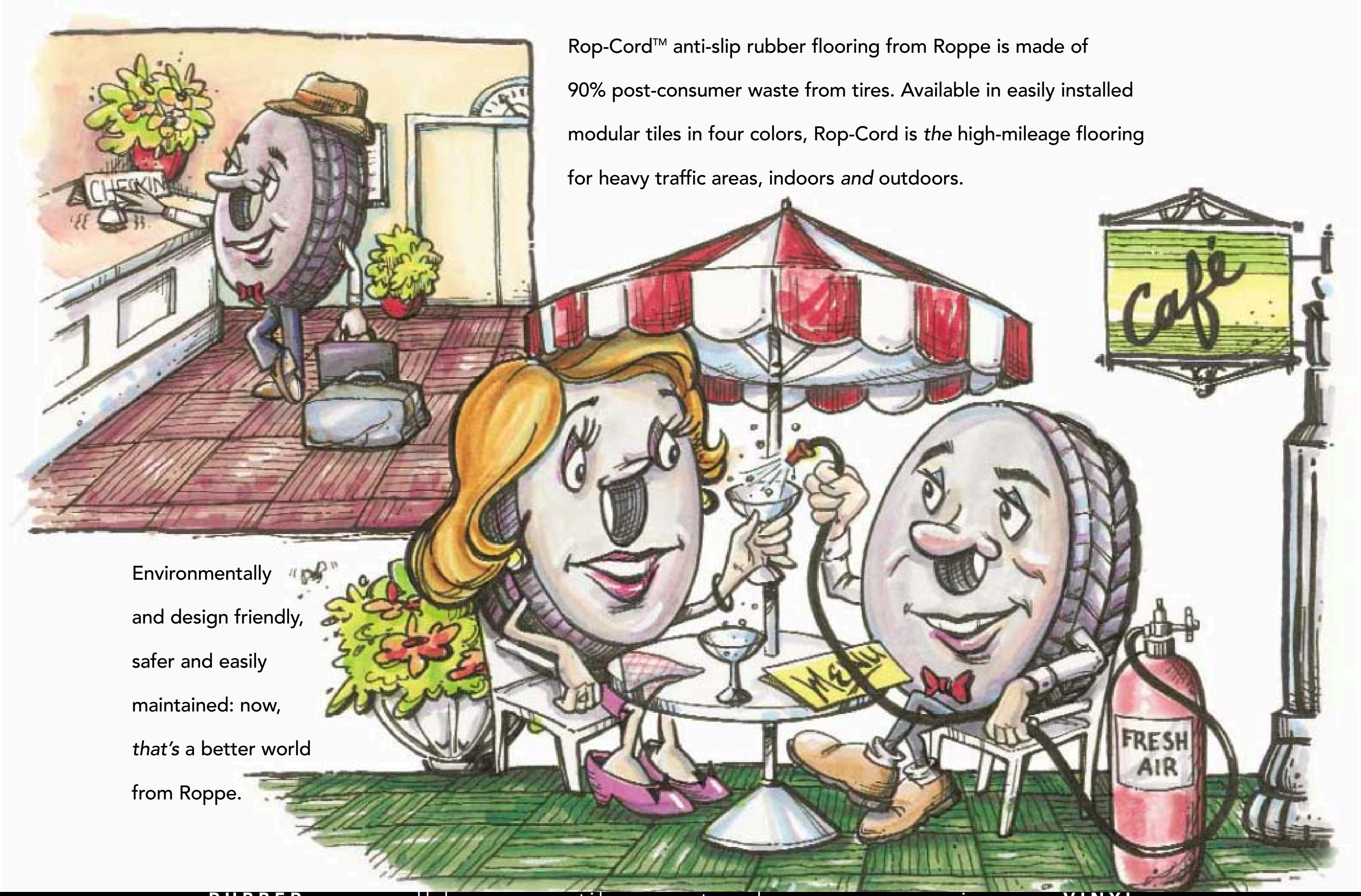

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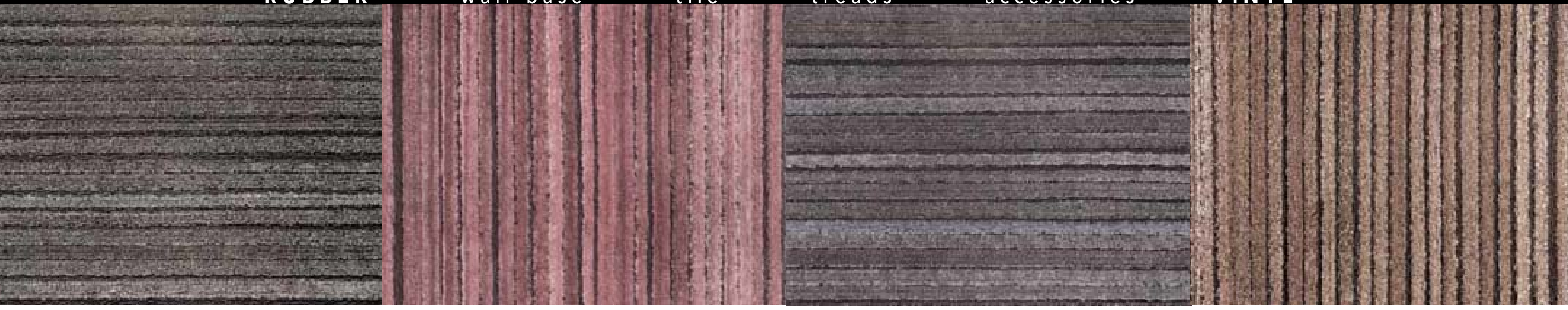

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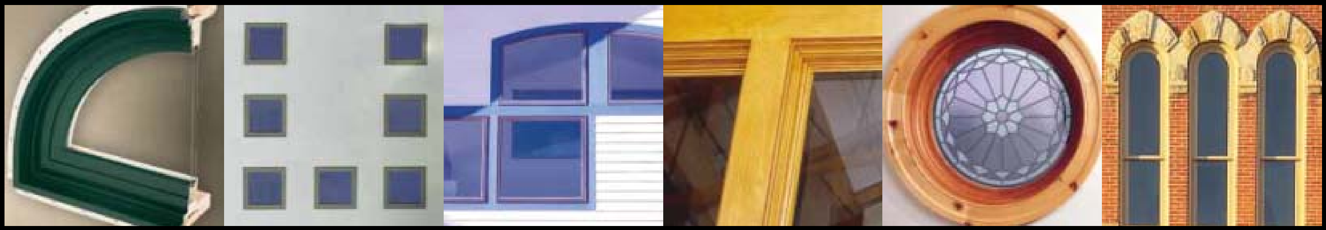

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Reinventing Qingpu

By Jen Lin-Liu

Twenty-five miles northwest of skyscraper-congested downtown, Shanghai's suburban district of Qingpu is like the often-ignored older cousin of the metropolis's more glamorous and wealthier districts.

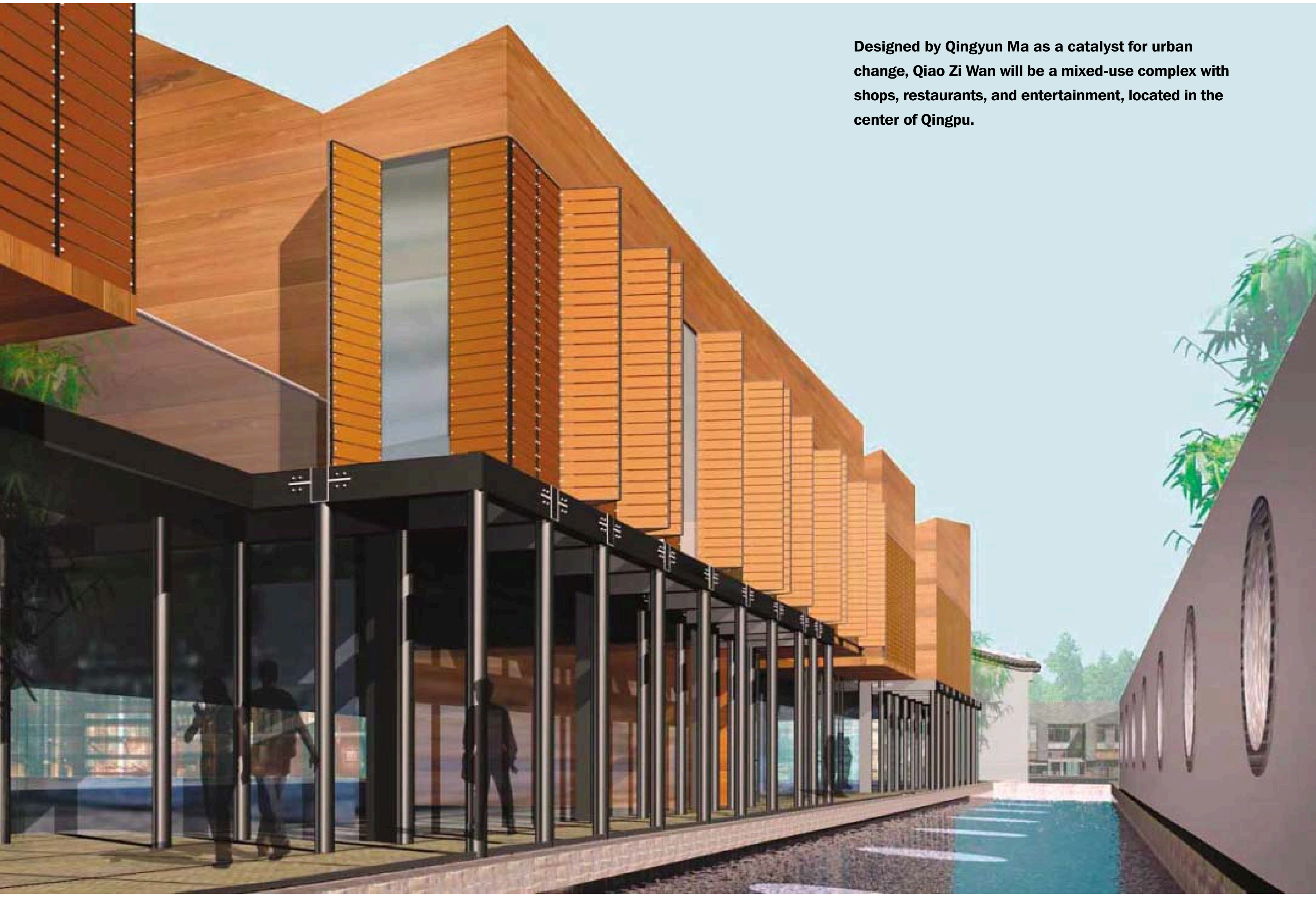
Though Qingpu was settled hundreds of years earlier than Shanghai, the city's more central districts since the early 1990s have raced ahead in building high-rises and setting up special development zones to attract high-tech companies. Qingpu is more famous for its natural waterways, which have been used as a mode of transportation for centuries.

But city planners and architects are moving beyond developing China's population-heavy metropolises and looking outward as development enters a new phase, driven by the country's economic boom. Qingpu, which has recently gotten a burst of foreign investment with multinational companies like Dupont, Honeywell, and Hitachi setting up light manufacturing plants here, is now poised to receive an injection of architectural modernism.

Qingpu differs from the run-of-the-mill Chinese suburb, which usually consists of shoddy buildings with white-tile exteriors and utilitarian cement homes, thanks to its natural beauty, its proximity to the heart of China's wealthiest city, and its vice district chief, Jiwei Sun. [Chinese names in this article follow the Western convention of family name at the end.]

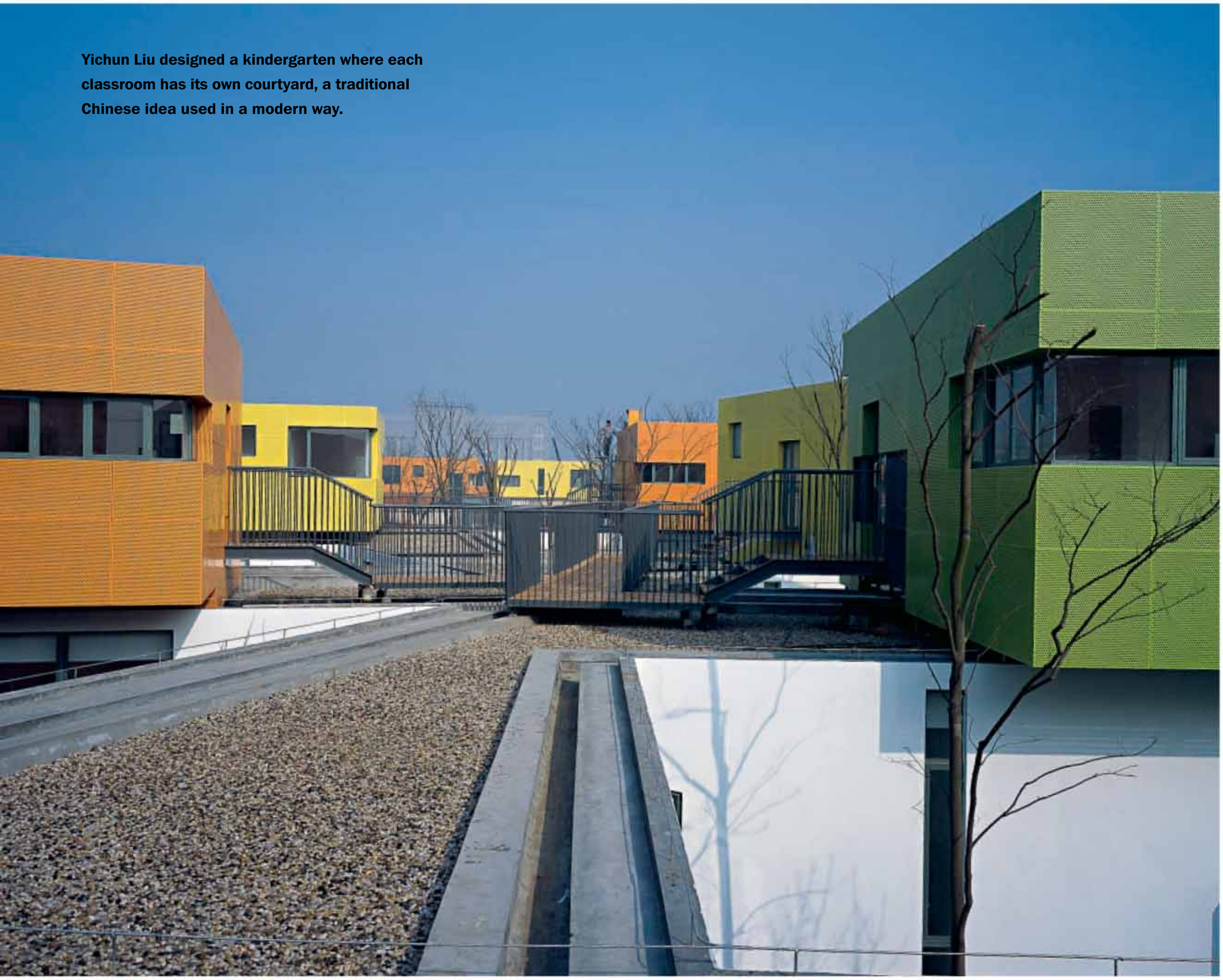
It began in 2002, when Sun, who was the chair of the construction committee for Shanghai's central Luwan District, was promoted to

Jen Lin-Liu is an American journalist living in Beijing who has written for Newsweek, *The Associated Press, and* The Chronicle of Higher Education.



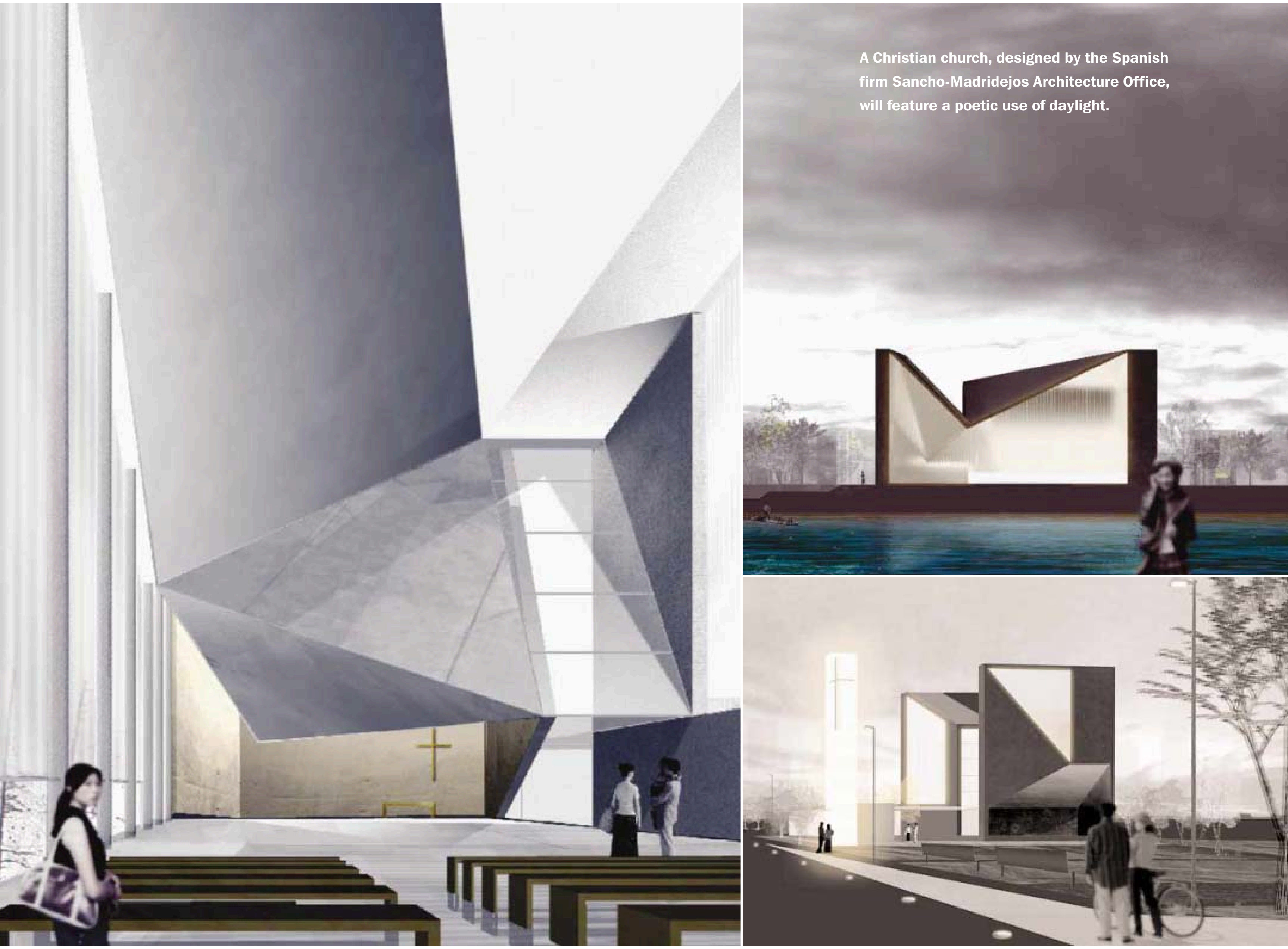
Designed by Qingyun Ma as a catalyst for urban change, Qiao Zi Wan will be a mixed-use complex with shops, restaurants, and entertainment, located in the center of Qingpu.

Beautiful canals and waterways run through the historic center of Qingpu (left). But in the 20th century, factories were built in outlying areas (far left). Plans call for a combination of historic preservation and innovative new architecture to create a dynamic city.



Yichun Liu designed a kindergarten where each classroom has its own courtyard, a traditional Chinese idea used in a modern way.

As construction moves forward on designs by architects from around the world, some parts of Qingpu are caught between periods, suspended between a time of traditional houses and one of modern construction (right).



A Christian church, designed by the Spanish firm Sancho-Madridejos Architecture Office, will feature a poetic use of daylight.

work in Qingpu District. His position is not unlike that of a vice mayor of a large town in America, given Qingpu's population of 250,000. A big challenge was attached to Sun's new job: to develop Qingpu in a sustainable way as its projected population grows to half a million people by 2020. "Qingpu used to be considered an outer suburb," says Sun. "But now it's an important satellite city."

Besides being known for its canals, Qingpu, a 7,298-square-mile district that is shaped like a butterfly, was until recently home to many state-owned factories manufacturing everything from soy sauce to cement. But China's transition to a more market-oriented economy meant that many factories were forced to close. Meanwhile, other parts of Shanghai that relied less on state-owned industries experienced much growth.

Because it has lagged behind other districts in development, Qingpu can learn from the mistakes of past city planning, says Sun: In central Shanghai, "development happened too quickly. They threw away a lot of things by tearing down old buildings with historical value." He adds that planners in the past have not attached much aesthetic value to architecture.

Since the district's population is expected to double, in essence Sun has to create a new city, which the government has named Qingpu Xincheng, or Qingpu New City. About 22 square miles of land has been set aside for factories of multinational companies. Nearly 10.8 million square feet of new residences will be built. Sun also wants to spruce up historic Qingpu's tourist attractions, like Zhujiajiao, an area riddled with waterways and knick-knack shops, by having architects design new hotels and shops.

An important goal amid all the building and revitalization is that the "natural shape of the land is being preserved," says Sun. "We want to keep all the canals intact." The district plans to create a system of water buses on the waterways, like Venice, for locals and tourists alike. Another way that Qingpu's plan differs from that of other towns is that it has managed to attract a number of foreign architects to build schools, government buildings, a church, and other public places. The architects that Sun has hired include Jacques Ferrier of France, Spanish architect

A CONVERSATION WITH JIWEI SUN

Soon after overseeing the completion of Xintiandi, one of Shanghai's most high-profile projects in a ritzy, central part of town, Jiwei Sun shifted his focus to the task of reinventing the less-than-glamorous suburb of Qingpu.

He brought to Qingpu ideas that government officials and architects had learned from building Xintiandi, a project that converted historic dwellings into a modern, mixed-use district. After it was completed, "our expectations were higher," says Sun. The government learned two lessons, Sun says: to preserve history and to choose the right architect for the project. In China's hodgepodge of haphazardly and hastily built cities, these rules are often broken.

Architects and colleagues regard Sun as a progressive, forward-thinking government official—which many agree is remarkable in China. "He doesn't have to look at a project long to know your intent and whether that intent can be carried out," architect Qingyun Ma says of Sun. "Most politicians and leaders don't have the means to care about architecture."

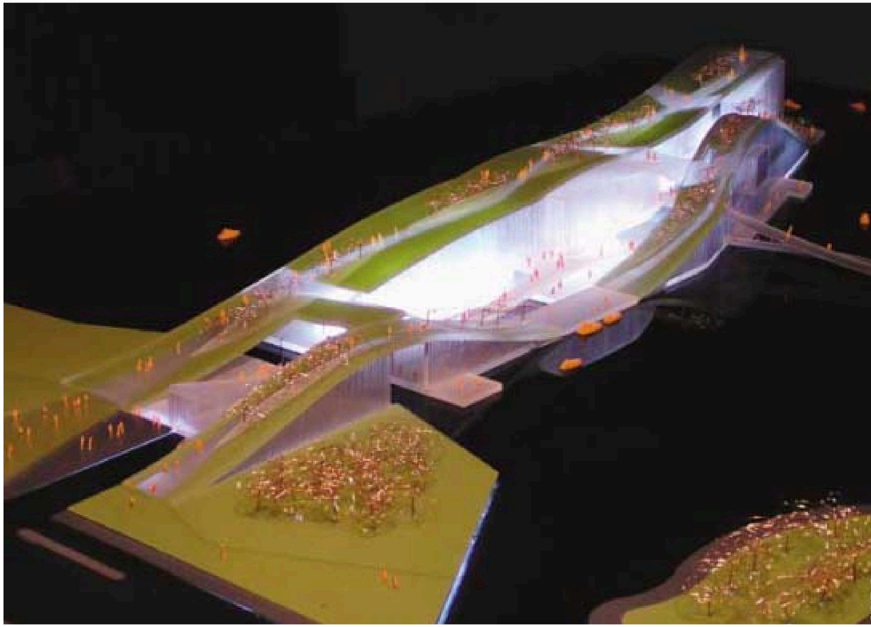
Sun explains that his background as an architect sets him apart from other planning officials, most of whom have little education in architecture or planning. After graduating from Tongji University's architecture school, he worked as an architect for five years before going into the government. "I'm very clear about the problems we have. The government ought to have responsibility in pushing things in a healthy direction."

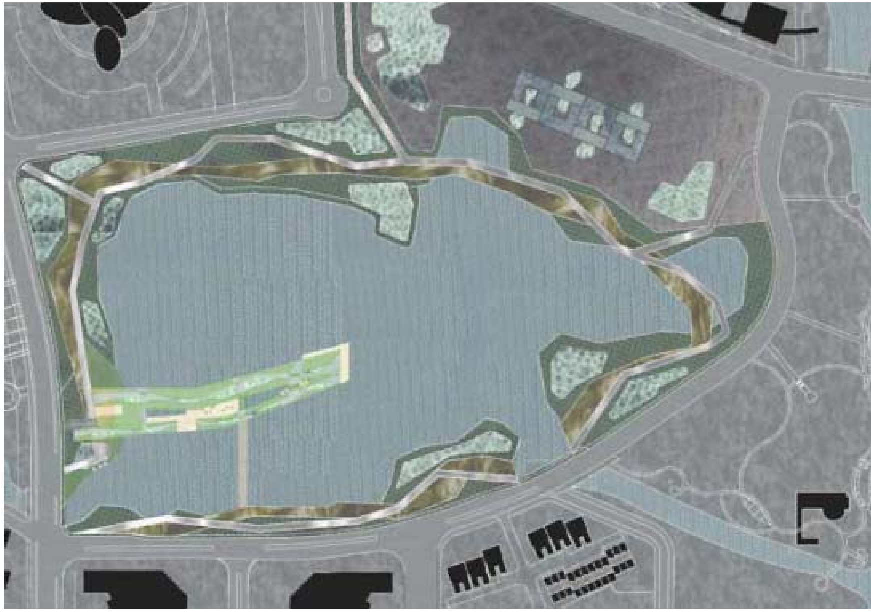
Given that China's days as a completely state-run economy are over, however, Sun believes that private developers and architects must also play a large role in how cities are shaped. "It can't be in the hands of only the government," he says. Unlike other districts that give developers great leeway, Qingpu requires that developers go through a thorough application process to ensure the developer's vision coincides with the city's.

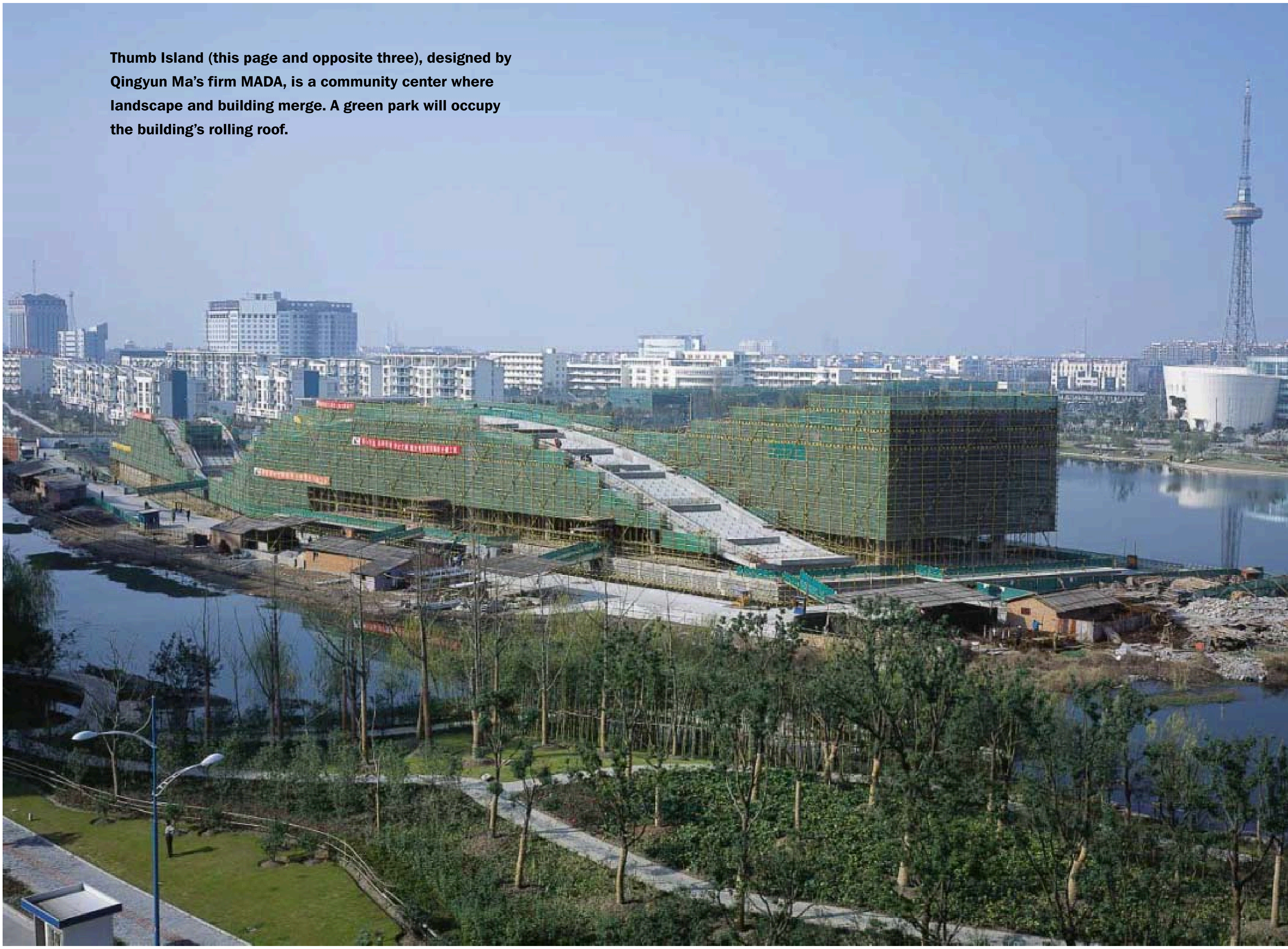
As one of the few voices in the government pushing for careful planning and preservation, Sun says he often finds himself trying to convince others that "city planning and design are very important in deciding how a city is perceived."

To that end, he has set up mandatory classes for government cadres to attend every month at the district's main government building. Promoting it as a social event, Sun has invited national experts such as Tongji professors or seasoned architects to lecture officials on topics including architectural history and preservation.

A staunch supporter of preservation, Sun believes that Chinese cities should follow Europe's lead in how to manage small but densely populated areas. "In Europe, each individual small town has its own characteristics. In China, we can learn from this." *Jen Lin-Liu*







Thumb Island (this page and opposite three), designed by Qingyun Ma's firm MADA, is a community center where landscape and building merge. A green park will occupy the building's rolling roof.

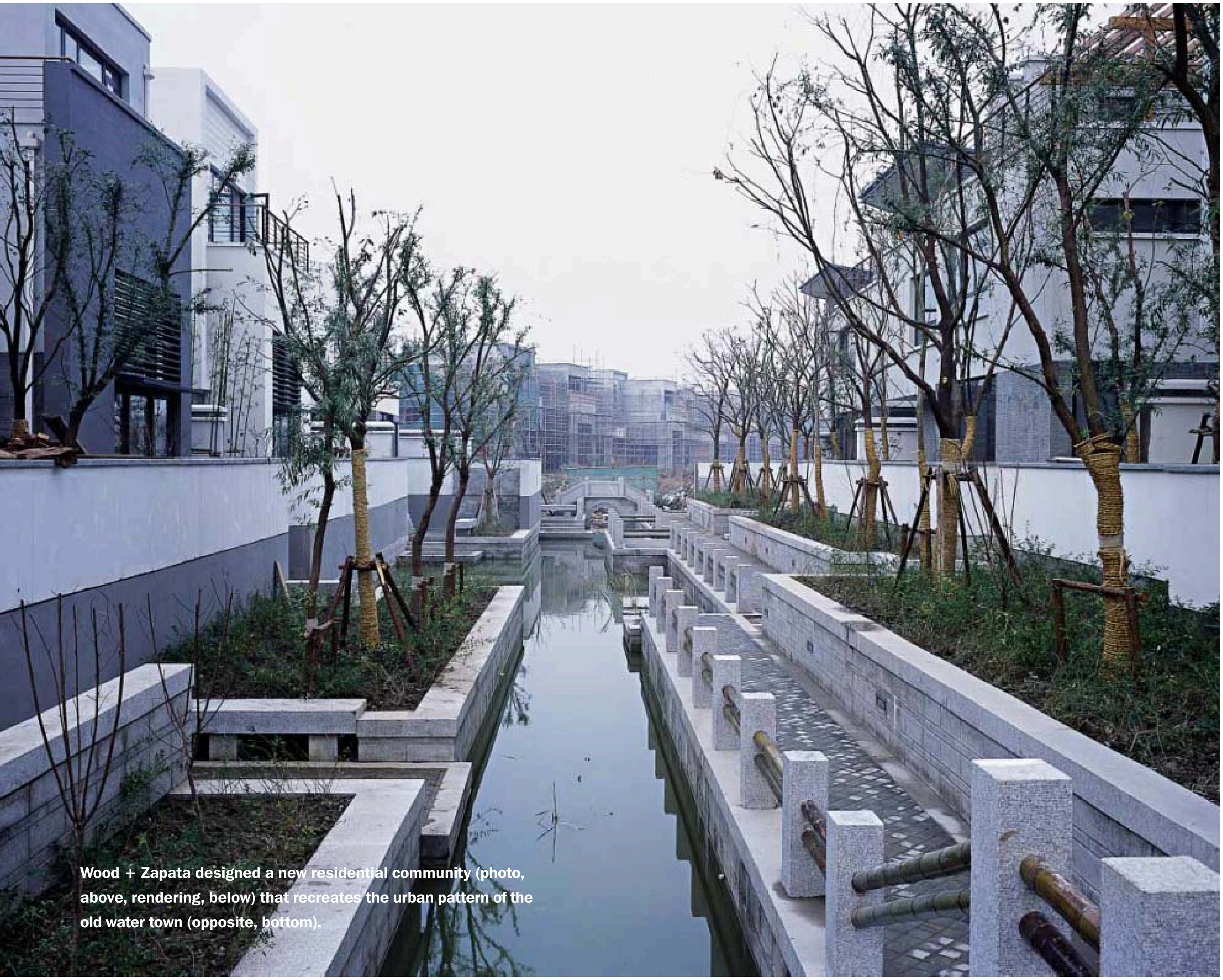
Sancho-Madridejos, and Kunyan Deng from Taiwan.

What makes the activities in Qingpu even more remarkable is that the district does not have any special funds for attracting architects to do public works. (Sun estimates that the district spends $610 million per year on overall development.) Rather, Sun has managed to attract a number of international architects to Qingpu through cultivating relationships and by giving architects free artistic range. Foreign architects are often eager to build in China and can provide alternative approaches to design and planning.

One architect who has taken the lead in developing Qingpu is Qingyun Ma, who heads his own firm in Shanghai called MADA s.p.a.m. A graduate of the University of Pennsylvania's architecture school, Ma found himself plunging headfirst into issues that he had tried to avoid while practicing as an architect in America. "I used to be a pure Modernist," he says. After returning to China three years ago, "I realized that my refusal to do anything historical was wrong. [History] is so pervasive."

Though Ma is younger than many of the Qingpu planning officials he advises, he has managed to earn their respect. That respect has given Ma the freedom to build several projects in Qingpu, including Qiao Zi Wan, or Bending Bridge Bay, which is located on an oval-shaped piece of land surrounded by canals. Currently a run-down abandoned residential area, the site is being cleared to make way for a commercial district with a pedestrian thoroughfare. Located next to a park and temple built in the Qing Dynasty, the challenge has been to "introduce something new in a historic environment," says Ma.

Another project of Ma's is the innovative Thumb Island, a community center that floats on a lake. Free from the responsibility of dealing with history here, Ma has designed a structure composed of two buildings that rise and fall gently like two glass-encased mounds. The roof of the complex, which resembles two rolling hills, will become a public park. Standing atop the half-completed clubhouse, Ma says, "I'd love it if people did tai-chi up here."



Wood + Zapata designed a new residential community (photo, above, rendering, below) that recreates the urban pattern of the old water town (opposite, bottom).

American architect Benjamin Wood, of Wood + Zapata, was attracted to Qingpu because he says he was given "carte blanche" by the Australian developer SPG to create his vision of a residential community—without a gate. Having just completed a high-profile project in central Shanghai called Xintiandi, Wood shifted his focus to Qingpu to build town houses, villas, and apartments with an urban core of several restaurants and an old farmhouse that's been converted into a cultural center. "It's sort of a transformation of the vernacular water town urban typology with clean Modern lines," says Wood.

Indeed, much of the construction involves taking into account what already exists, or the historic surroundings of a project. For his part, Sun wants a former flour factory to be converted into lofts for artists. A state-owned warehouse will be turned into an exhibition center. Sancho-Madridejos, the Spanish firm, has been commissioned to rebuild a Christian church—itself a rarity in China—in a futuristic style with sharp lines. Nearly completed is a public kindergarten by Chinese architect

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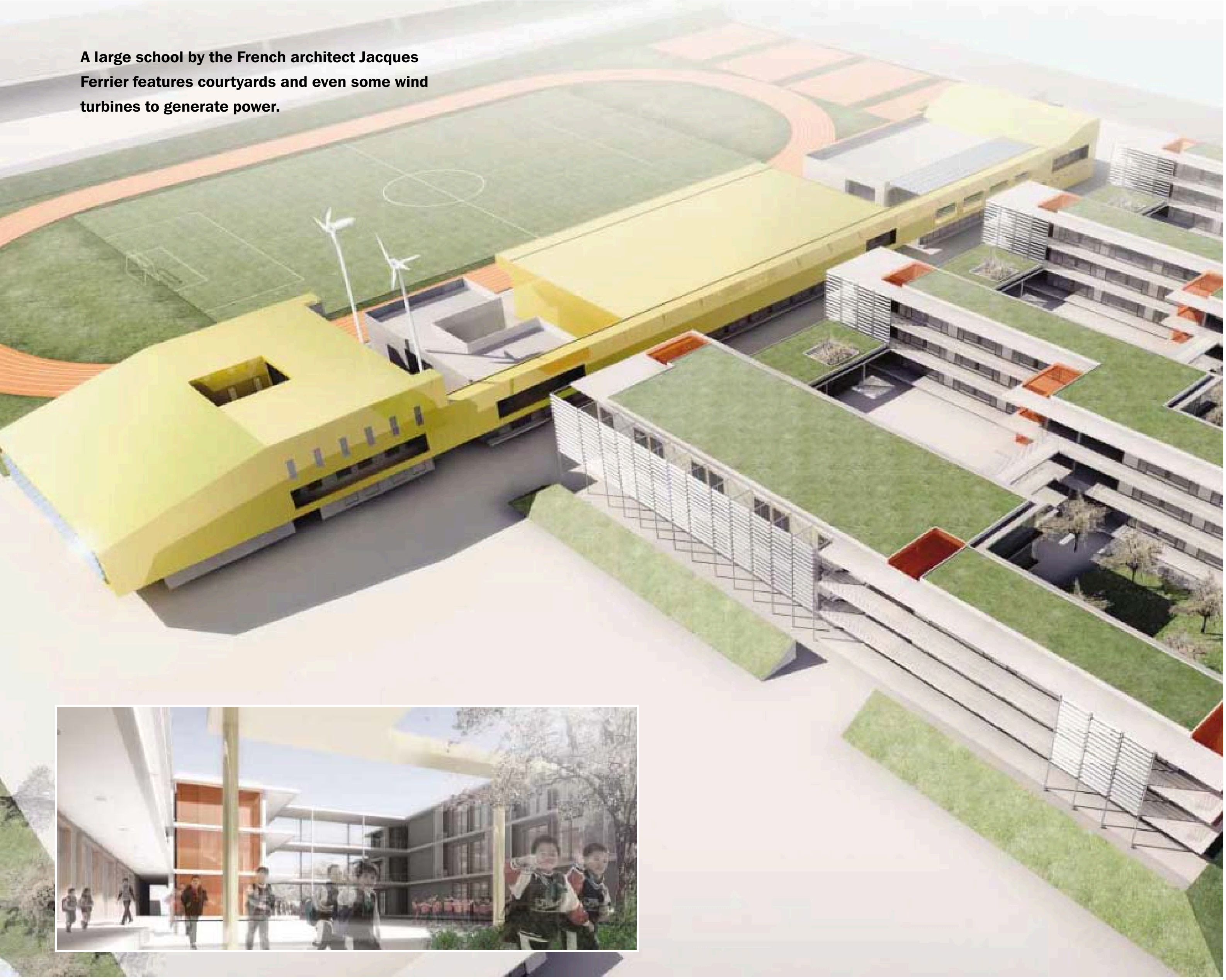
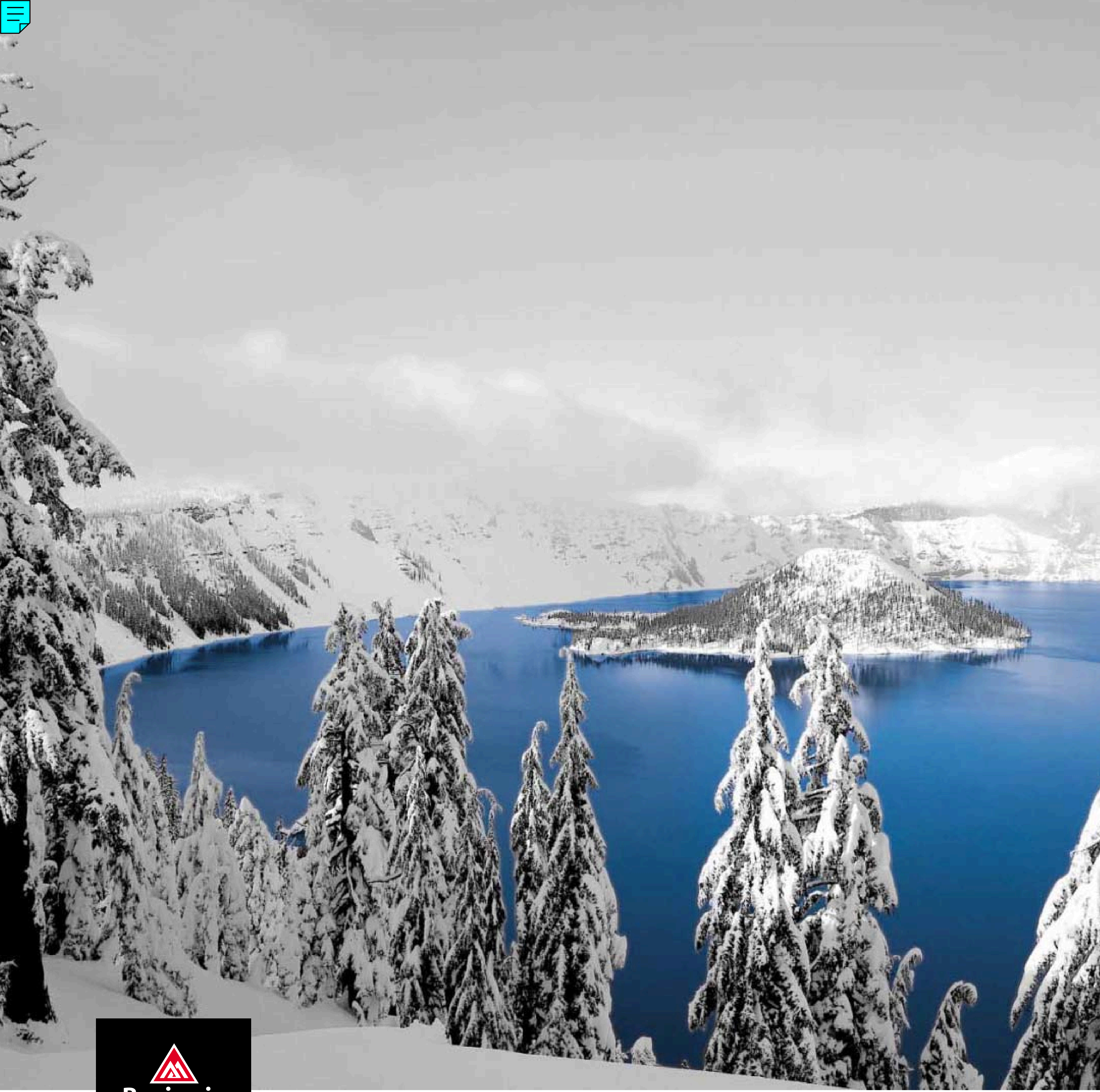

A large school by the French architect Jacques Ferrier features courtyards and even some wind turbines to generate power.

Yichun Liu that features 15 blocky classrooms, each with a courtyard, a traditional Chinese feature of homes, but done in a nontraditional way.

While developers usually can push their vision through when building in other places in China, those who build in Qingpu are put through a rigid test, says Fanny Ma, the deputy general manager of Hongda Group, a Chinese developer that is building a project in the tourist area of Zhujiajiao. “The government’s needs reflect our needs,” she says. “It might be more frustrating in the beginning of the process, but afterward, our project has zipped along like a high-speed train.”

With many projects still in the incubation stage, however, it is yet to be seen what Qingpu will become. Though roads have been paved and schools have been built, Qingpu New City has the feel of an empty shell, since few buildings have been fully completed. Ma, the architect, counters that the biggest change so far in Qingpu is not a physical one: “It’s a psychological change. Designers and architects are having to really think to get a job here. The threshold has been raised.” ■



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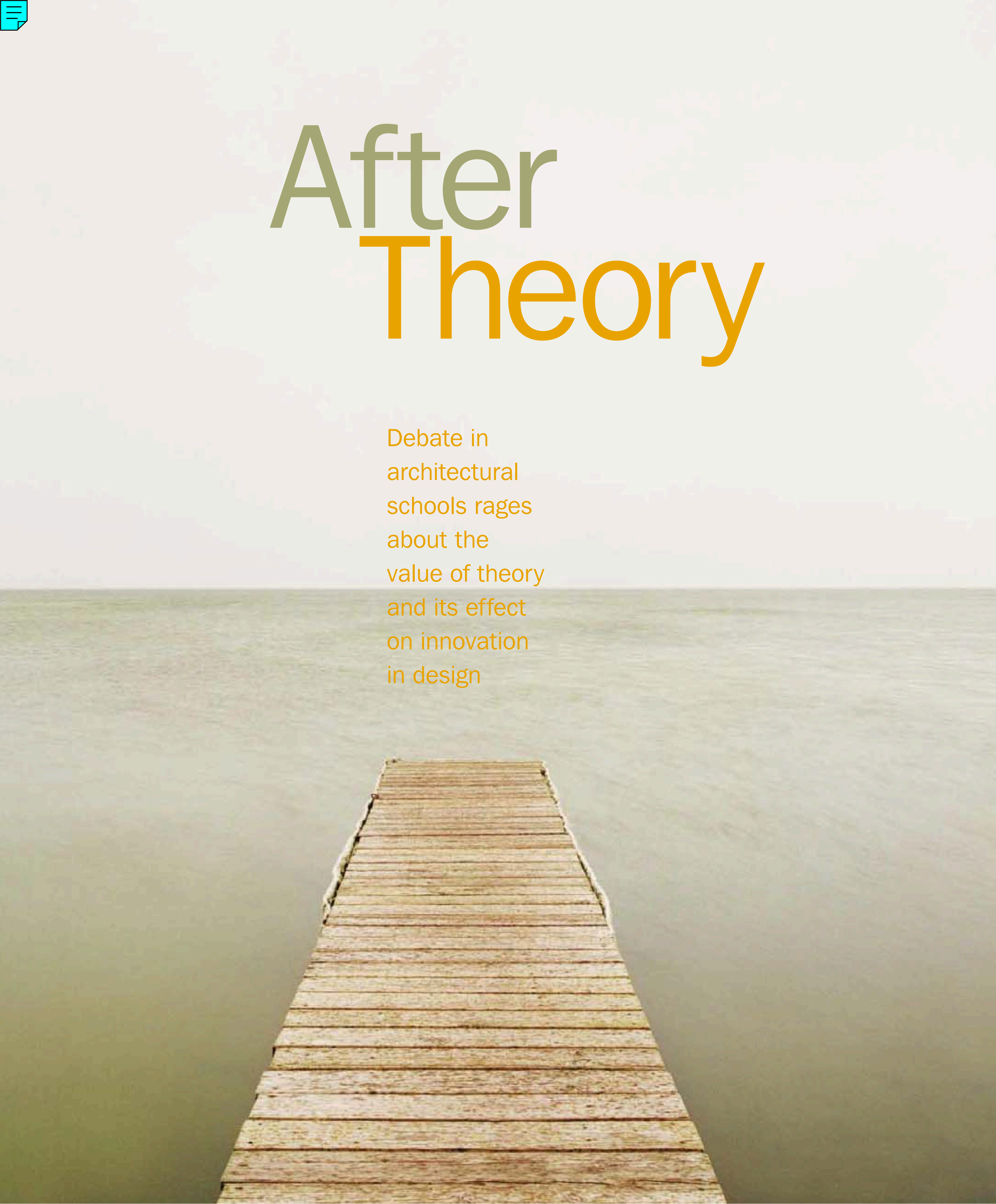
After Theory

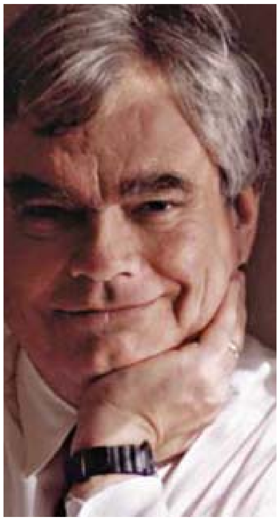
Debate in architectural schools rages about the value of theory and its effect on innovation in design



By Michael Speaks

Over the past several years, some of our most prestigious schools and institutes of architecture have drawn up balance sheets in an effort to document where the discipline has been and to propose where it should be going. Despite their obvious concern, most schools have nonetheless been slow to recognize the fundamental nature of the challenges confronting architecture in a world increasingly dominated by technological change and marketization. Although they have done an adequate job teaching new digital techniques of design and analysis, schools have largely failed to develop an intellectual culture that would enable students to make the best use of these skills in a marketplace that puts such a high value on innovation.

One reason may be that since the 1970s, many of the so-called elite schools have embraced a form of vanguardism shrouded in Deconstruction and Marxism. They share an almost constitutional aversion to commerce and the marketplace, the very milieu of innovation and shaper of any future architecture, whether you are in Boston, Beijing, or Buenos Aires. The grip that these theories have on the intellectual culture of schools is so strong that until very recently it inhibited the development of alternative forms of thinking. Many critics, however, now recognize that these resolutely negative vanguard theories have been made irrelevant by the rapidly modernizing and flattened world that has begun to take shape over the past decade. Few, however, have recognized that we don't just need a new "theory," but instead we need a new intellectual framework that supports rather than inhibits innovation.



George Baird, dean, Faculty of Architecture, Landscape, and Design, University of Toronto.

Nonetheless, there are signs inside the schools themselves that the grip of such theories is beginning to loosen and that alternatives to them are emerging. George Baird, dean of the Faculty of Architecture, Landscape, and Design at the University of Toronto, published an essay in the *Harvard Design Magazine* (fall 2004/winter 2005) that summarizes recent debates between two generations of critics and teachers who hold very different views on the relevance of Deconstruction, Marxism, and theory in general to architectural education and contemporary practice. Baird focuses on an attack mounted by a younger generation, including Stan Allen, Sylvia Lavin, Robert Somol, Sarah Whiting, and me, on the "critical" architecture that has been promoted and defended for more than 25 years in architecture schools by the architect Peter Eisenman and Harvard professor of architectural theory Michael Hays. Eisenman's writings, like the claims of theorist Jacques Derrida, the father of Deconstruction, contend that there is no ultimate truth, but only incomplete, critical engagements with historically determined versions of truth. For Eisenman, critical, or "dislocative," architecture, as he once called it, critiques these normative versions of architectural truth in a seemingly endless search for a real but ultimately unattainable essence of architecture. And this essence, for Eisenman, can only be expressed in the abstract perfection of forms shielded from the market-driven demands of program, use, and commercial viability.

Sylvia Lavin, chair of Architecture and Urban Design at UCLA.

Hays, on the other hand, has established himself as one of our most influential theorists by extending and expanding Marxist historian Manfredo Tafuri's claim that all architecture is unredeemably corrupted by capitalism. Architects are thus obliged to either create work that resists capitalism or attempt to bring about an end to capitalism so that a new, utopian architecture can emerge. Eisenman and Hays have established—through the journals they respectively founded and edited, *Oppositions* (1973–84) and *Assemblage* (1986–2000), through the many books they have published, and through long, distinguished teaching careers—the intellectual foundation for architecture that resists, negates, and attempts to create alternatives to establishment or market-corrupted design and commercial culture in general.

The above-mentioned younger critics, or "post-critics," as Baird sees them, have rejected "criticality" in favor of an engagement with the very same conditions that Eisenman and Hays seek to resist. Sylvia Lavin's support for a "cool" architecture that is unapologetically fashionable, desirable, and ephemeral; Robert Somol and Sarah Whiting's call for "projective" architecture practices that, as they say, engage market forces without capitulating to them; and Stan Allen's

Michael Speaks, a contributing editor at RECORD, *is former director of the graduate program at SCI-ARC, and has a Ph.D. in literature from Duke.*

PHOTOGRAPHY: © TORONTO STAR (LEFT); DACIA MITCHELL (RIGHT)

Robert Somol, assistant professor of architecture at UCLA.

assertion that "architectural practice does not comment on the world, it operates in and on the world," certainly confirm this. Baird cites my own work, including a series of essays published in this magazine [RECORD, December 2002, page 74, and January 2002, page 72] as the most polemical and market-friendly of these critiques, and as having initiated the first frontal attack on criticality.

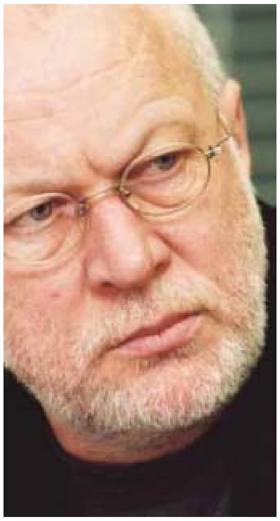
In addition, it is worth pointing out that Baird's "post-critics" have distanced themselves from, and in some cases have rejected, architecture theory altogether. Lavin, in an essay published almost 15 years ago in *Progressive Architecture* (August 1990), and more recently Allen, in several roundtable discussions, have expressed considerable doubt about the impact of theory on design practice. While not dismissive of theory, Allen—who has admitted on many occasions that it played a very important role in his own intellectual development, and indeed in the development of the intellectual life of architecture inside and outside of the academy—feels theory's importance is now a historical rather than a contemporary matter. As such, it has little or nothing to contribute to practice.

Breaking, perhaps, with Baird's other "post-critics" (a designation, in any case, I do not acknowledge), I would argue that theory is not just irrelevant but was and continues to be an impediment to the development of a culture of innovation in architecture. Posing as a youthful alternative to Enlightenment certainty, theory was instead old-fashioned enlightened critique turned on itself—unremitting critique chasing its own tail, without purpose or end. Theory also perpetuated the Enlightenment belief that thinking is separate from and in fact guides doing; that manifestos guide political action; that architecture theory guides architecture practice.

Jeffrey Kipnis, professor of architecture at Ohio State's School of Architecture.

Action is thus dependent on the discovery or declaration of a set of guiding truths or principles, even if, as was the case with theory, the truth is that there is no truth. This was certainly the case with the famous *Deconstructivist Architecture* exhibition held at the Museum of Modern Art in New York in 1988. Like the "truths" discovered by early-20th-century architecture vanguards and written down in their manifestos, theory offered Mark Wigley and Philip Johnson, the show's curators, a new truth masking as nontruth. Published in an accompanying catalog, Wigley's brilliant manifesto bound together the vanguard theory of Jacques Derrida and the vanguard architectural forms of Russian Constructivism.

Such was the role theory played in architecture beginning with the first issue of *Oppositions* and ending with the final issue of *Assemblage*: to provide the architecture vanguard a left-political intellectual agenda that would enable it to resist, criticize, and propose utopian alternatives to capitalism and the market. That fantasy has finally lost its allure and all connection to the real world. The architecture community is now left to face the future without guidance from the all-knowing theory vanguards that dominated schools since the 1970s.



Michael Hays, professor of architectural theory at Harvard's Graduate School of Design.

More perhaps than anything else, the certainty of theory vanguardism has retarded the development of a culture of innovation in schools of architecture, which requires a more fluid, interactive relationship between thinking and doing, as well as an expanded definition of what counts for architectural knowledge. Suggesting one way this might be accomplished, Jeffrey Kipnis, one of the most important theorists of Deconstruction in architecture and a participant in "How to Become a Star," a cheeky public discussion on architectural education hosted by Wolf Prix at the Academy of Applied Arts in Vienna last spring, proposed that schools focus on teaching architectural expertise, which he carefully distinguished from mere technique. Only those who have mastered the basic competencies of the discipline can innovate, Kipnis con-

PHOTOGRAPHY: © DINO PEGEE (LEFT); COURTESY JEFFREY KIPNIS (MIDDLE); COURTESY MICHAEL HAYS (RIGHT)

tends, because only such experts know how to use technique to exceed the boundaries and limitations defined by that discipline. Kipnis may very well be right, but just what that expertise consists of and how it will be taught is still an open question, perhaps the most important question facing schools today.

In the meantime, it is not surprising that the most promising answers to the question regarding the future direction of architecture are not being formulated in the studios and seminars in our best schools, where all manner of digital design and fabrication techniques are being taught, and where new species of form are born (at least on the screen) every day, but in the workshops and on the desktops of small offices—in the test labs, that is, where new forms of architectural practice are being forged.

William Menking, in a recent essay in *The Architect's Newspaper* (January 25, 2005), for example, noted the growing importance of the workshop to several New York area architecture and design offices, including Sharples Holden Pasquerelli (ShoP), Freecell, and FACE in New York City; William Massie in Troy, New York; and Veyko in Philadelphia. "What makes today's workshops unique is that they can quickly fabricate models directly from laser-milling machines to build one-to-one full-scale models," he wrote. This allows them, as Sean Tracy of FACE told Menking, "to quickly see the limitations of a design and the complexities of its construction."

This kind of speculative testing and prototyping is an example of what Michael Schrage, codirector of MIT Media Lab's E-market Initiative, calls a "spreadsheet way of knowledge." This is a form of thinking-as-doing that creates design knowledge, or "design intelligence," as I have called it in this and other magazines, through design prototyping. Recounting the introduction in 1979 of the first personal digital spreadsheet, "VisiCalc," which made it possible for a single accountant or manager to model and manipulate a "phantom business" inside their personal computer, Schrage proposes that spreadsheet thinking introduces the possibility to project plausible business futures or design prototypes that can be tested, redesigned, and retested quickly, cheaply, and under conditions that closely approximate reality. Such prototyping is inherently innovative because it allows the designer to make and test numerous "phantom" designs, speculating—thinking, that is, by doing—on a range of plausible designs, which, in the absence of such speculation, might seem implausible. Moreover, it allows the designer the ability not only to offer the client alternative solutions to design problems, but it also permits the designer to reframe and present alternative design problems that the client had no way of formulating. Of course, this has always been the case, but with CNC (Computer Numerical Control) milling, digital fabrication, and parametric modeling, speculation happens in real time with real material.

Peter Eisenman, a New York architect, teaches at Yale, Princeton, and Cooper Union.

Stan Allen, principal of Field Operations and dean of the School of Architecture at Princeton.

PHOTOGRAPHY: © DENISE APPLEWHITE (LEFT); AKG-IMAGES/UDO HESSE (RIGHT)

Significantly, prototyping also creates a shared design space that enhances collaboration and thus the introduction of variables that might not otherwise have been considered, leading to further innovation. Alejandro Zaera-Polo of Foreign Office Architects describes this process well when he says regarding the way his team worked on the Yokohama Port Terminal [RECORD, November 2002, page 142], "The design process became in itself a process of creating knowledge." Schrage believes that this is one of the most exciting features of new, digitally driven forms of prototyping, where the prototype, which can be analyzed, tweaked, and adjusted, becomes a tool of innovation and not just a version of the final design. Making becomes knowledge or intelligence creation. In this way, thinking and doing, design and fabrication, and prototype and final design become blurred, interactive, and part of nonlinear means of innovation. Schools would do well to learn the lessons being taught in the small, unassuming workshops of their younger faculty and their friends; and quickly, before another vanguard offers its very tempting services, and we are all treated again to a new version of a new truth that will lead us down another path. It has happened before. ■

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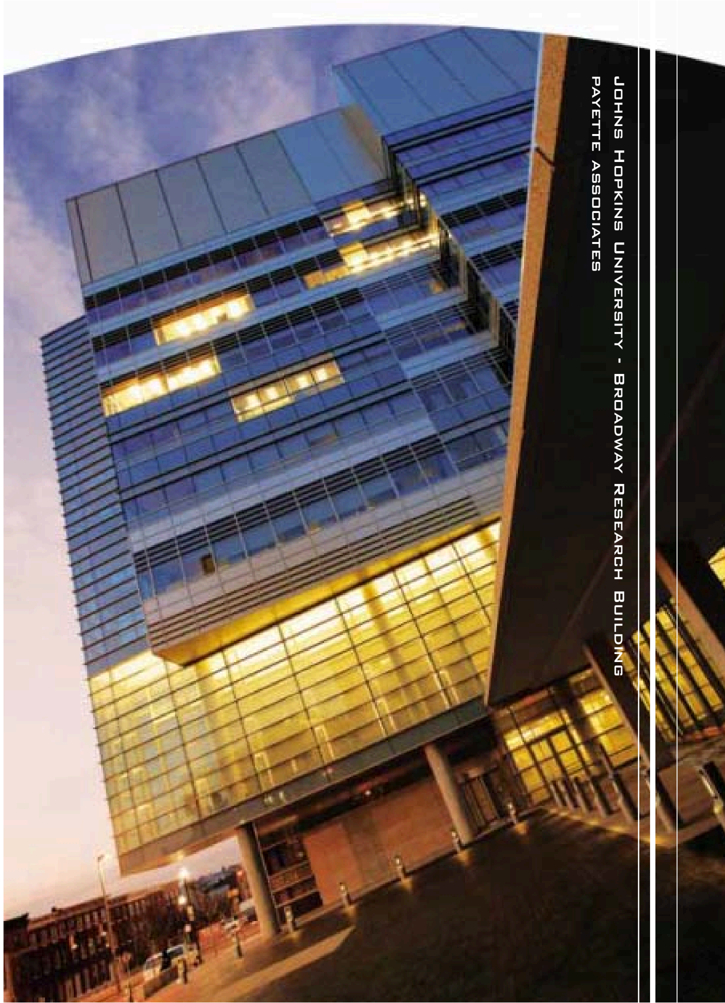

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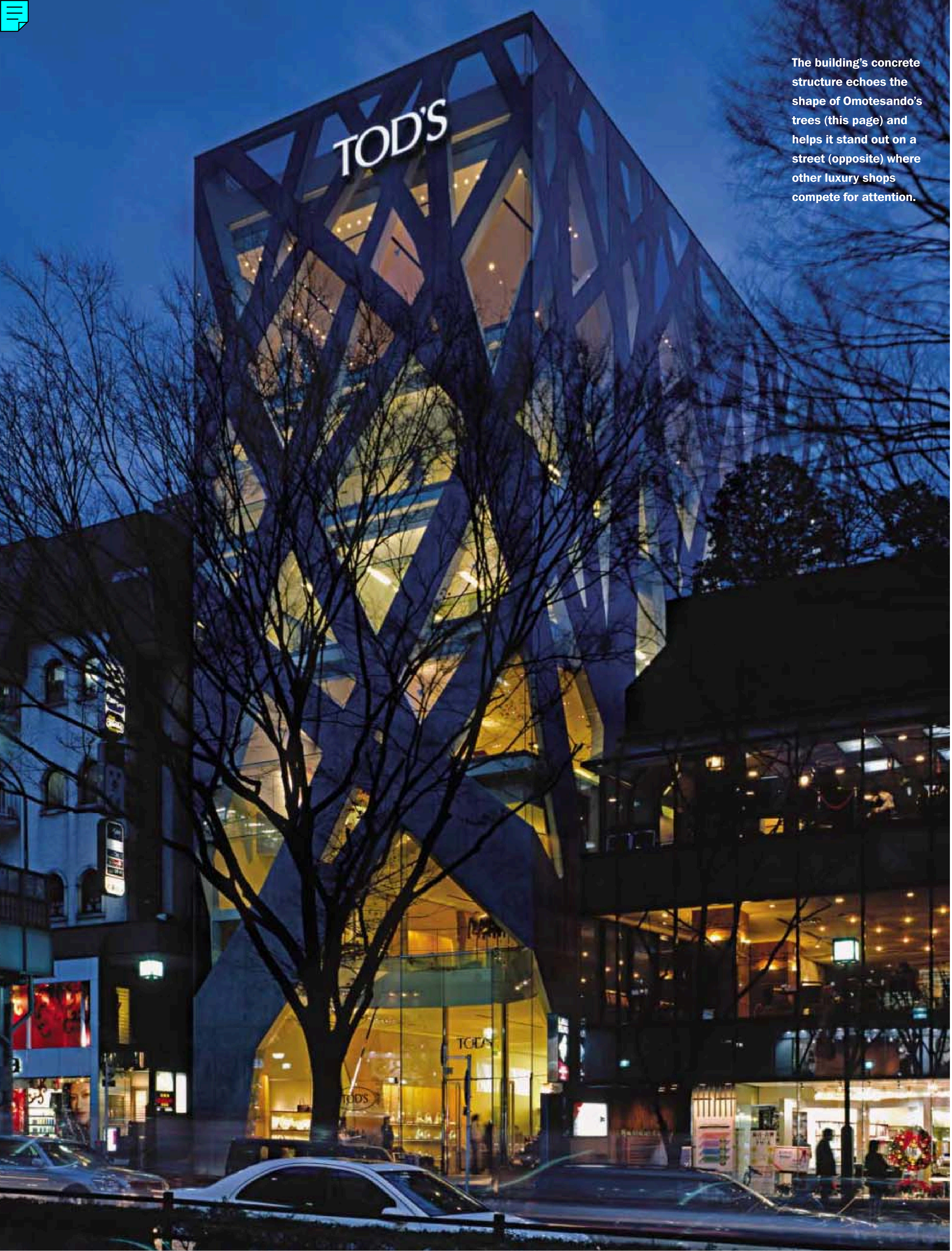
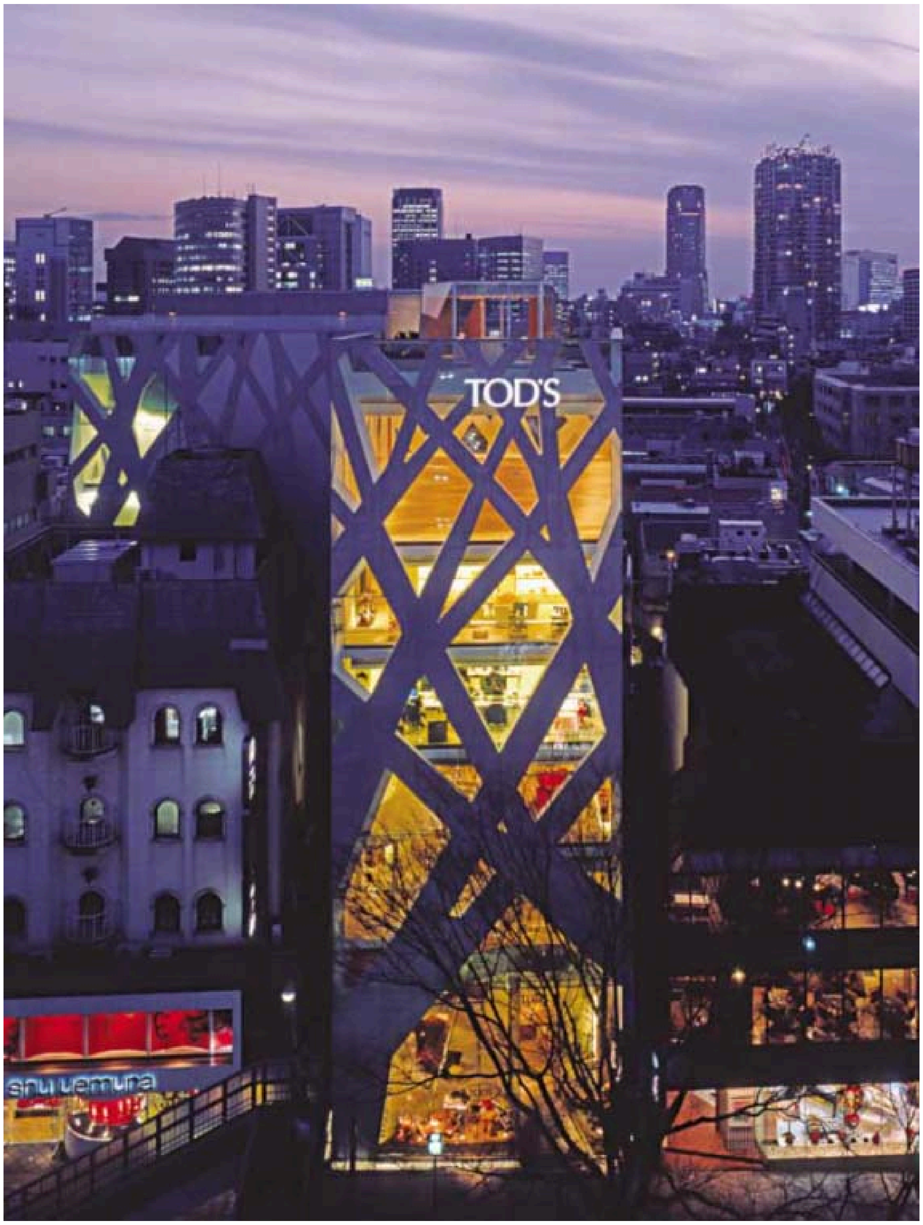


The building's concrete structure echoes the shape of Omotesando's trees (this page) and helps it stand out on a street (opposite) where other luxury shops compete for attention.

Toyo Ito fuses structure and wrapper in a network of concrete trees at the new TOD'S OMOTESANDO BUILDING in Tokyo

By Naomi R. Pollock, AIA



Toyo Ito's Tod's Omotesando Building feels like a good pair of shoes: fashionable, functional, made of quality materials, and a perfect fit. A slender, L-shaped building for the Italian footwear retailer, it contains offices and a boutique fronting Omotesando, Tokyo's famous four-lane, tree-lined boulevard that in recent years has become the city's showplace for luxury brands and top architects alike. Wrapped by a dramatic enclosure composed of sharply angled concrete elements and polygonal glass plates, Ito's 27,448-square-foot building boldly stands up to the competition.

Because the site, which is shoehorned between a cosmetics shop and a piano showroom, has only 33 feet of prime street frontage, Ito could not rely exclusively on the facade to create an identity for his client's Tokyo headquarters. Instead, he had to find a way to utilize the entire volume in order to distinguish Tod's from the plethora of glass-curtain-wall commercial projects nearby. He saw concrete as the answer, since it could make a strong visual statement on the outside and provide column-free space inside.

Comprising nine overlapping tree silhouettes, the building's six, 12-inch-thick exterior walls are load-bearing elements and surface treatment all in one. "Trees are organisms that stand by themselves, so their shape has an inherent, structural rationality," explains Ito. Like the deciduous zelkovas, the elmlike shade trees that line Omotesando, hefty trunks of concrete take root below grade at the Tod's building, where they direct their loads down to the foundations. As they climb, the masonry branches repeatedly bifurcate and become thinner, until they are cut off after seven stories. "We did not use any special algorithm to determine their size, but we tried to keep the elements from getting too small," explains Ito, who worked with structural engineer Masato Araya and his firm, Structural

Naomi R. Pollock, AIA, is RECORD*'s special international correspondent in Tokyo and the author of* Modern Japanese House*, to be published this autumn.*

Project: *Tod's Omotesando, Tokyo, Japan*
Owner: *Holpaf B.V.*
Architect: *Toyo Ito & Associates, Architects—Toyo Ito, Takeo Higashi, Akihisa Hirata, Kaori Shikichi, Leo Yokota, Takuji Aoshima, Yasuaki Mizunuma, design team*
Engineers: *Structural Design Office OAK (structural); ES Associates (mechanical)*
Lighting designer: *Light Design*
General contractor: *Takenaka Corporation*

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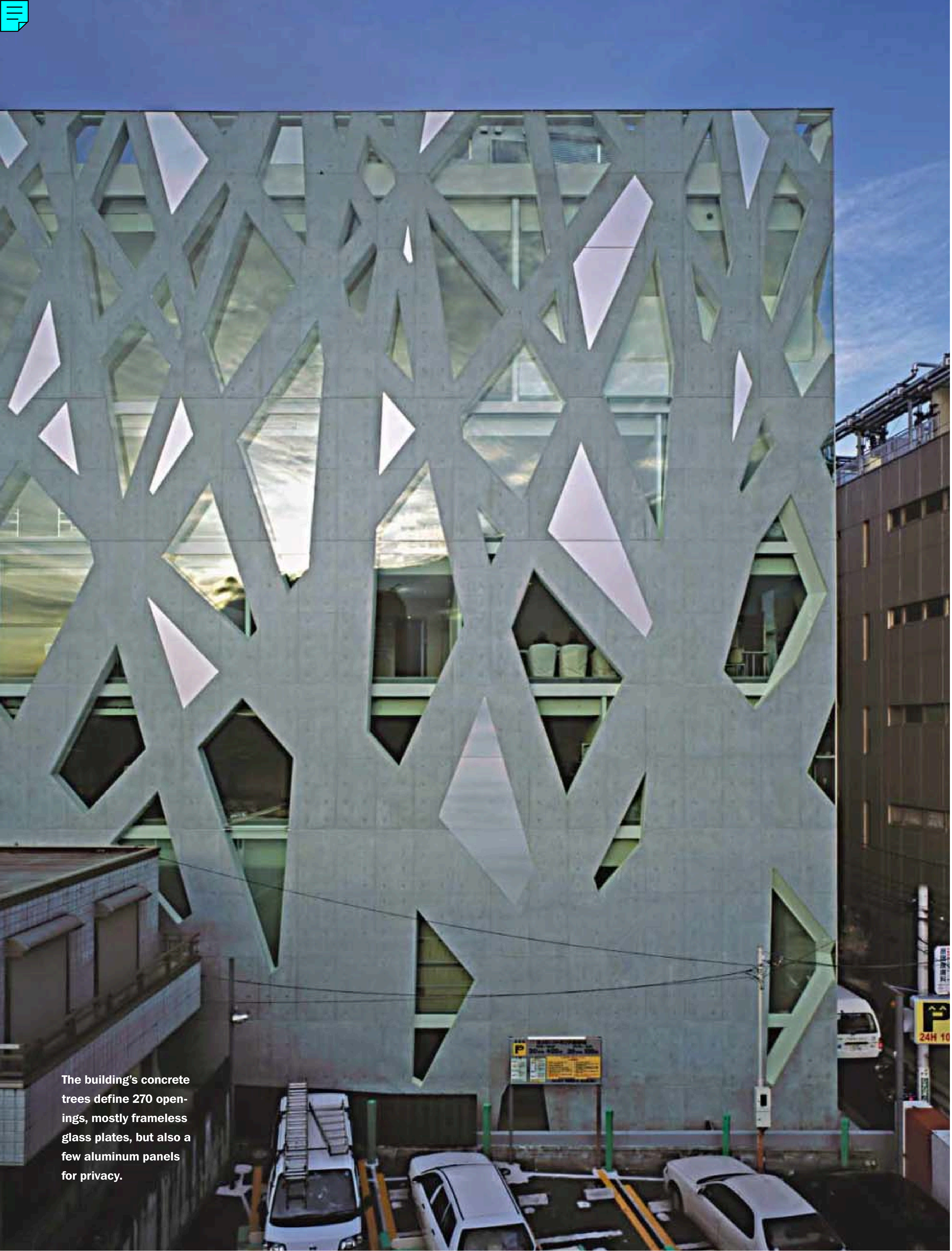
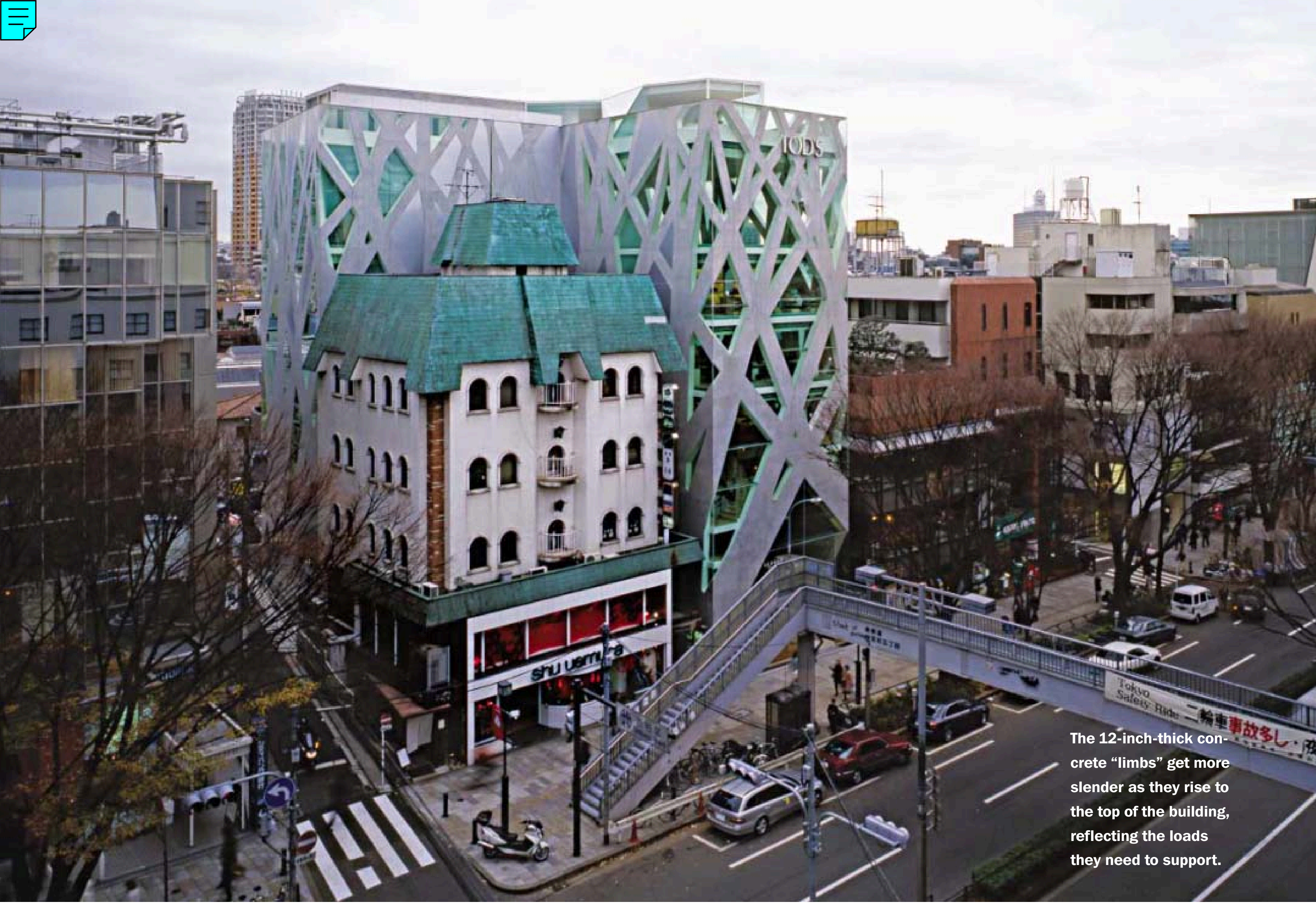


The building's concrete trees define 270 openings, mostly frameless glass plates, but also a few aluminum panels for privacy.



The 12-inch-thick concrete "limbs" get more slender as they rise to the top of the building, reflecting the loads they need to support.

Design Office OAK. Even so, it still took soft concrete with a high slump factor and two layers of wooden formwork to realize all the precise and uniquely shaped pieces.

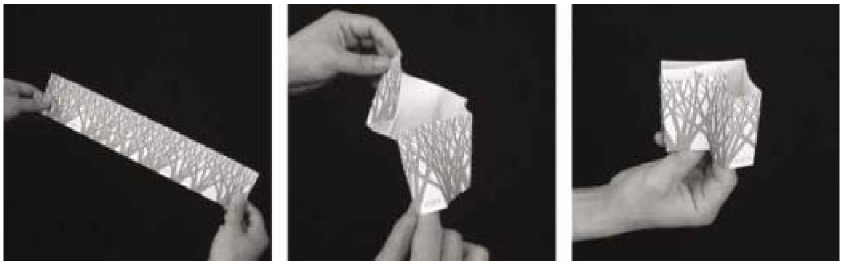
Between the concrete limbs, Ito placed 270 openings—each one different. Most hold flush-mounted, frameless glass plates. But where nearby buildings were a concern, or the composition warranted it, Ito inserted aluminum panels. Though the panes become smaller and more numerous closer to the roof, the overall balance between glass and concrete remains fairly consistent from top to bottom. Instead of openings cut into a solid concrete volume, transparency and opacity are on an equal footing.

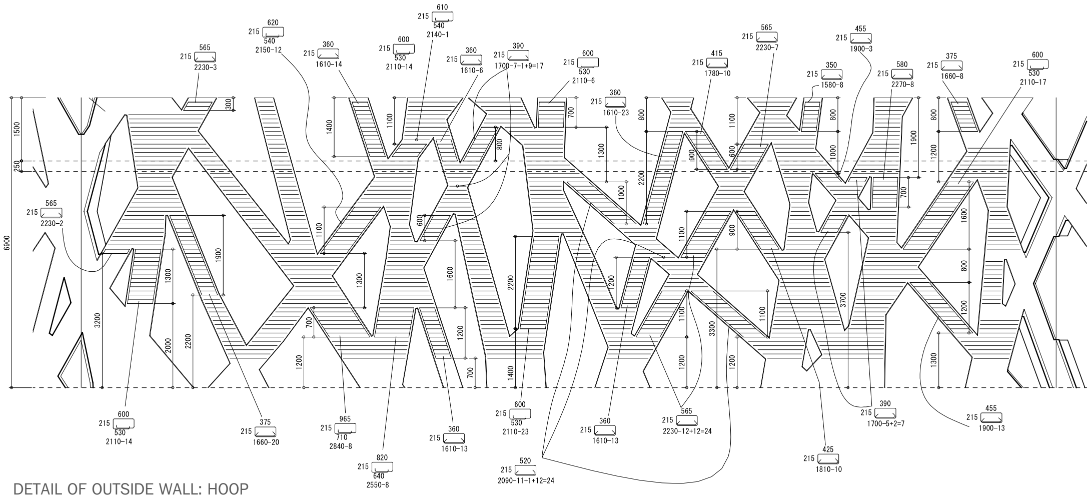
The sizes and shapes of the glass panels correspond neatly to the building's inner workings: the three-story shop, two floors of offices above that, an event space on the sixth floor, and a private meeting room and roof garden on top of it all. The largest opening is, understandably, the shop's display window. From the street, it reads as a two-dimensional sheet of glass divided by a concave space for the store's entrance. Intended to compensate for the boutique's limited street exposure, the opening is actually a crystalline box embedded in the building's facade. Triple height and unusually deep, it showcases an array of brightly colored shoes and handbags, not just to passersby but to shoppers inside as well.

Because the exterior walls and 20-inch-deep floor slabs carry all the structural loads, interior partitions and displays can be placed almost anywhere in the store. To maximize shoppers' contact with merchandise, Ito located stairs of sculptural glass, steel, and travertine either at the front or back of the retail areas. But to reach them, customers must circumvent Ito's freestanding, cellular display cases for accessories, skirt around maroon pony-hide benches designed by Zaha Hadid, and walk past the store's current collection arranged artfully on wall-mounted shelves. Wrapped with angled panels of bird's-eye maple, mirrored glass, and a caramel-colored Vachetta leather that Tod's frequently uses for purses, the shop interior is lush and luxurious but a bit slick and commercial; somehow Ito's calm Minimalism was left at the door.

Taking advantage of the site's half-floor-high slope, a second entrance leads directly from the narrow street bounding the site's south side to the building's administrative component above the shop. In addition to work space for the company's 70 employees on the third and fourth floors, this portion of the building features showrooms (on the fifth floor) for introducing new products to the press. One floor up, an 18-foot-high events room runs the full length of the building. Ringed by sweeping city views visible between the forest of intersecting concrete piers, the room can host fashion shows or elegant dinner parties.

Made of thick slabs of walnut wood, the party-room floor is refreshingly rough and unrefined but exemplifies Tod's commitment to use only the highest quality materials for its architecture as well as its shoes. This parallel is even more apparent in the private meeting and dining rooms, where the palette of materials includes travertine floors,

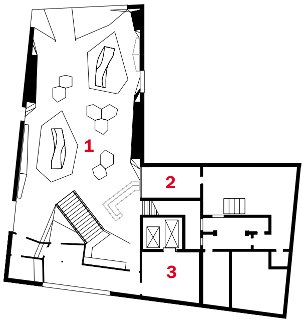




DETAIL OF OUTSIDE WALL: HOOP

In earlier projects, such as the temporary Serpentine Gallery in London, Ito had experimented with folded panels. With the Tod's building, the architect has combined a folded structural system with expressive concrete forms (photos, above, and drawing, left). The perimeter structural system provides column-free space on all floors (plans, below).

1. *Shop*
2. *Machine*
3. *Stock*
4. *Office entrance*
5. *Office*
6. *Lunch*
7. *Meeting*
8. *Showroom*
9. *Party*
10. *Dining*



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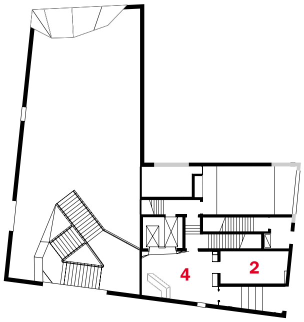

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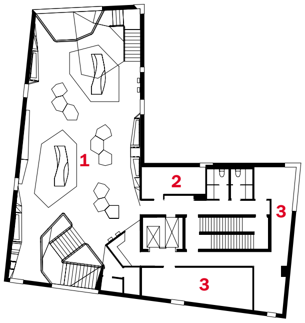

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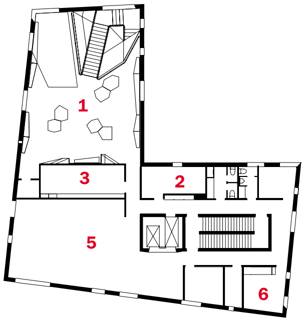

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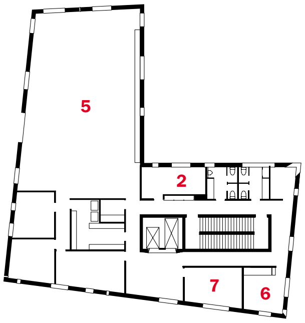

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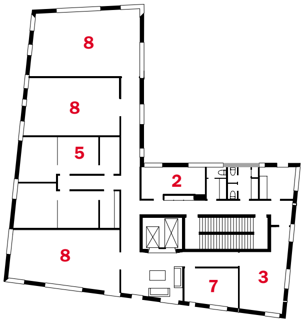

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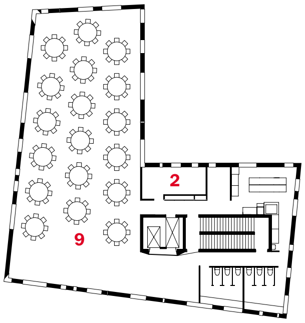

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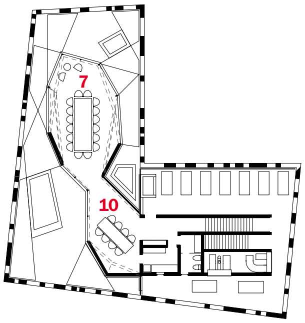

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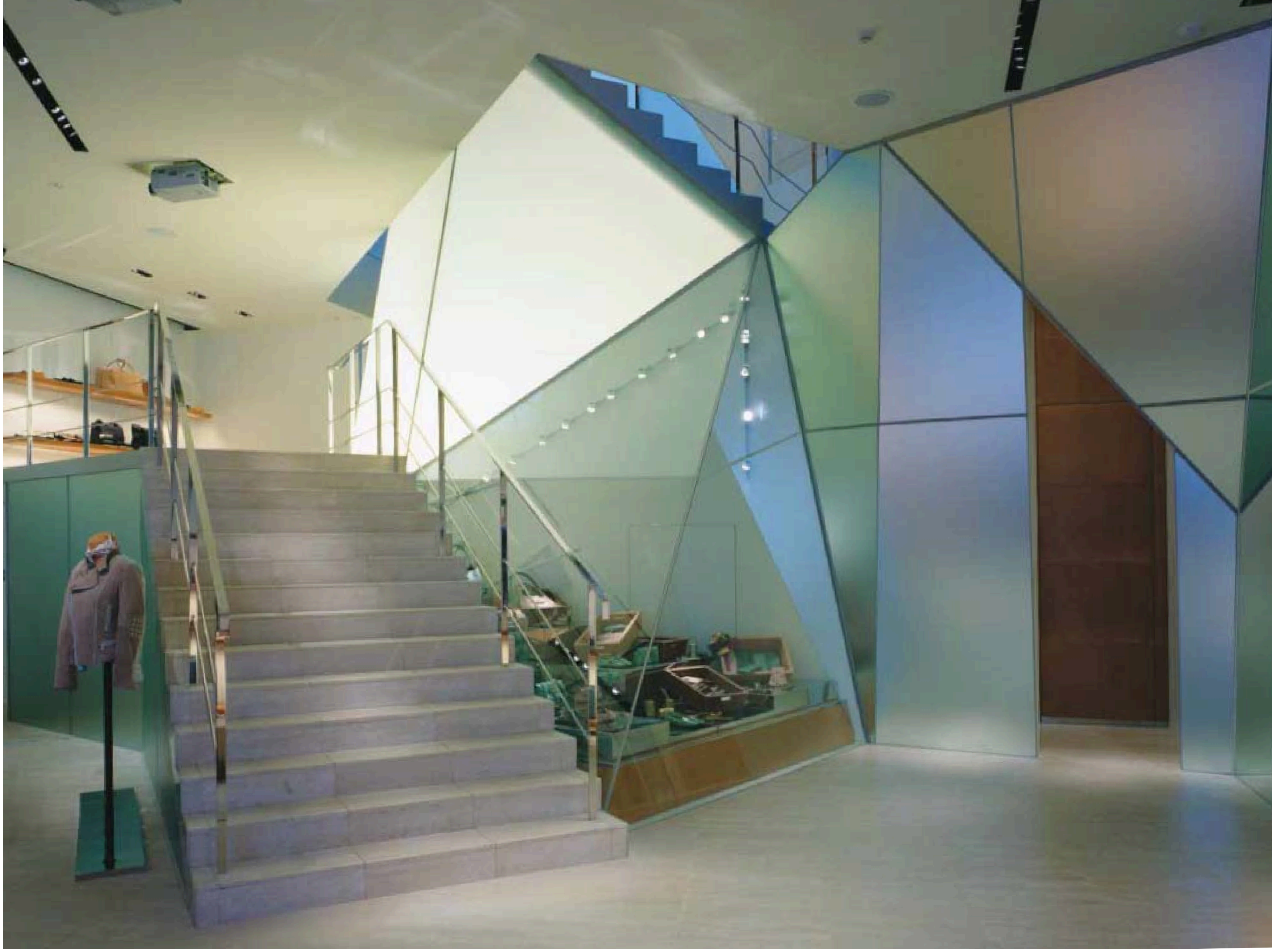
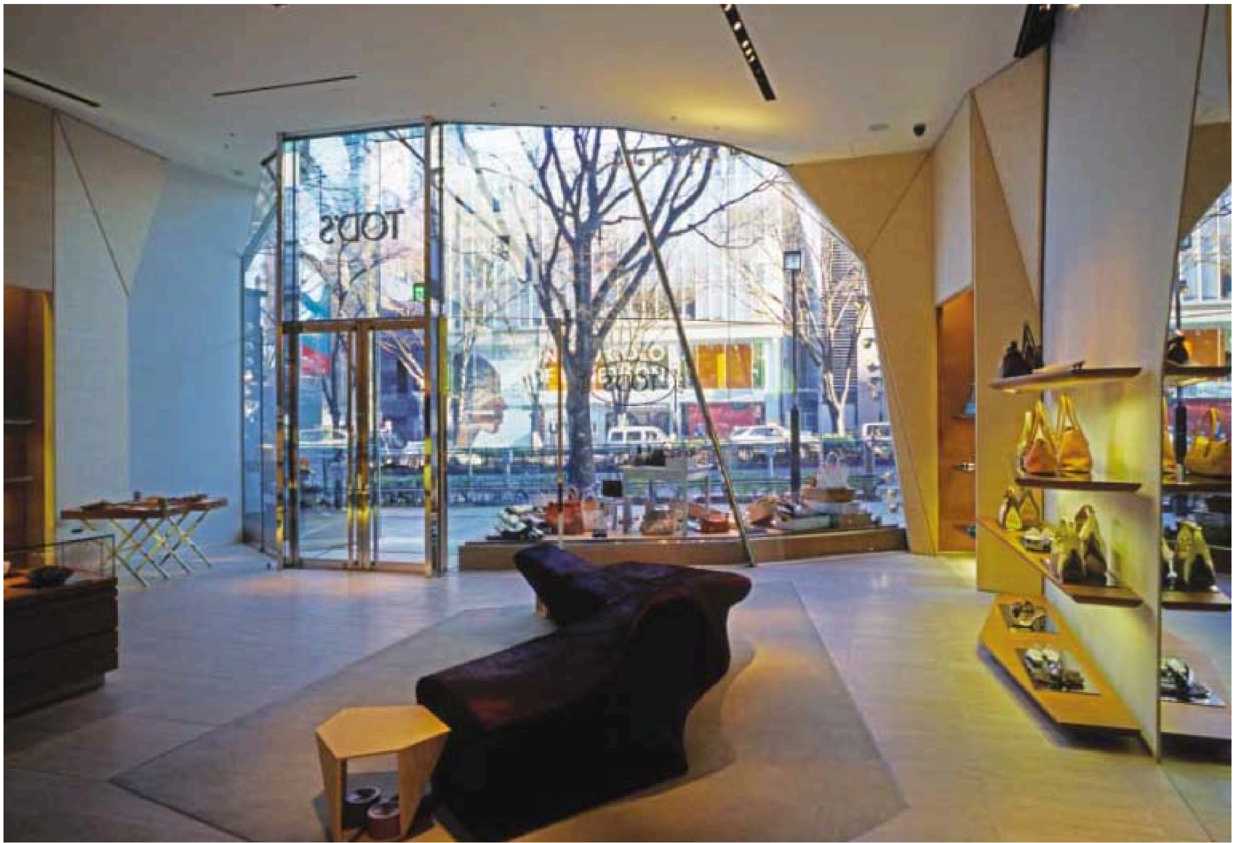
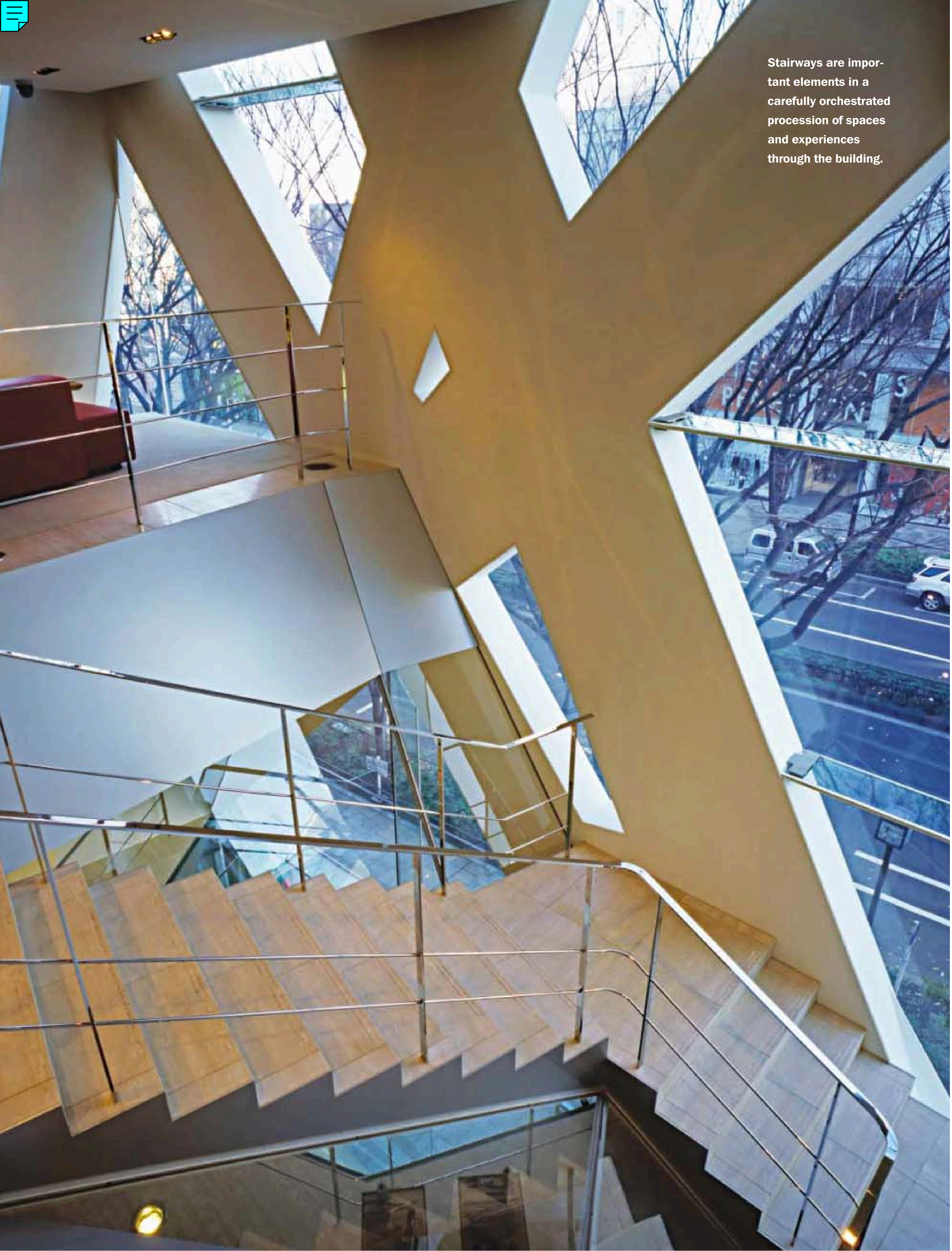


Ito brought the building's folded geometry inside the retail spaces, creating a dynamic relationship between displays and circulation (above). The main entry off Omotesando (right) includes a pony-hide bench designed by Zaha Hadid.





Stairways are important elements in a carefully orchestrated procession of spaces and experiences through the building.

A glass-enclosed meeting room (below and right) and a private dining room sit on the roof, surrounded by a grass-and-travertine garden. Small lounges and sitting areas (bottom two) offer shoppers places to try on shoes and enjoy the views.

PHOTOGRAPHY: © SERGIO PIRRONE (TOP LEFT AND TOP RIGHT)

antique stucco walls, and cowhide surfaces. Encased in irregular glass walls like giant display vitrines, the two rooms showcase leather-covered tables, walls, and doors—each one carefully stitched with contrasting white thread by one of 10 craftsmen imported from Italy. A terrace with grass patches, travertine paving, and elements of traditional Japanese gardens is the perfect stage for the two objectlike rooms.

The Tod's Omotesando Building is emblematic of the structural innovation we have come to expect from Toyo Ito, who masterminded such breakthrough buildings as Sendai's Mediateque and London's Serpentine Gallery Pavilion. Its clean, concrete exterior devoid of excess impresses us with its timelessness. Like a classic pair of loafers, it is bound to develop more character and patina as it ages. ■

Sources

Travertine rooftop pavers: *Yabashi Marble Company*

Curtain-wall glazing: *Asahi Glass Building*

Carpet tiles: *Hasetora Spinning Co.*

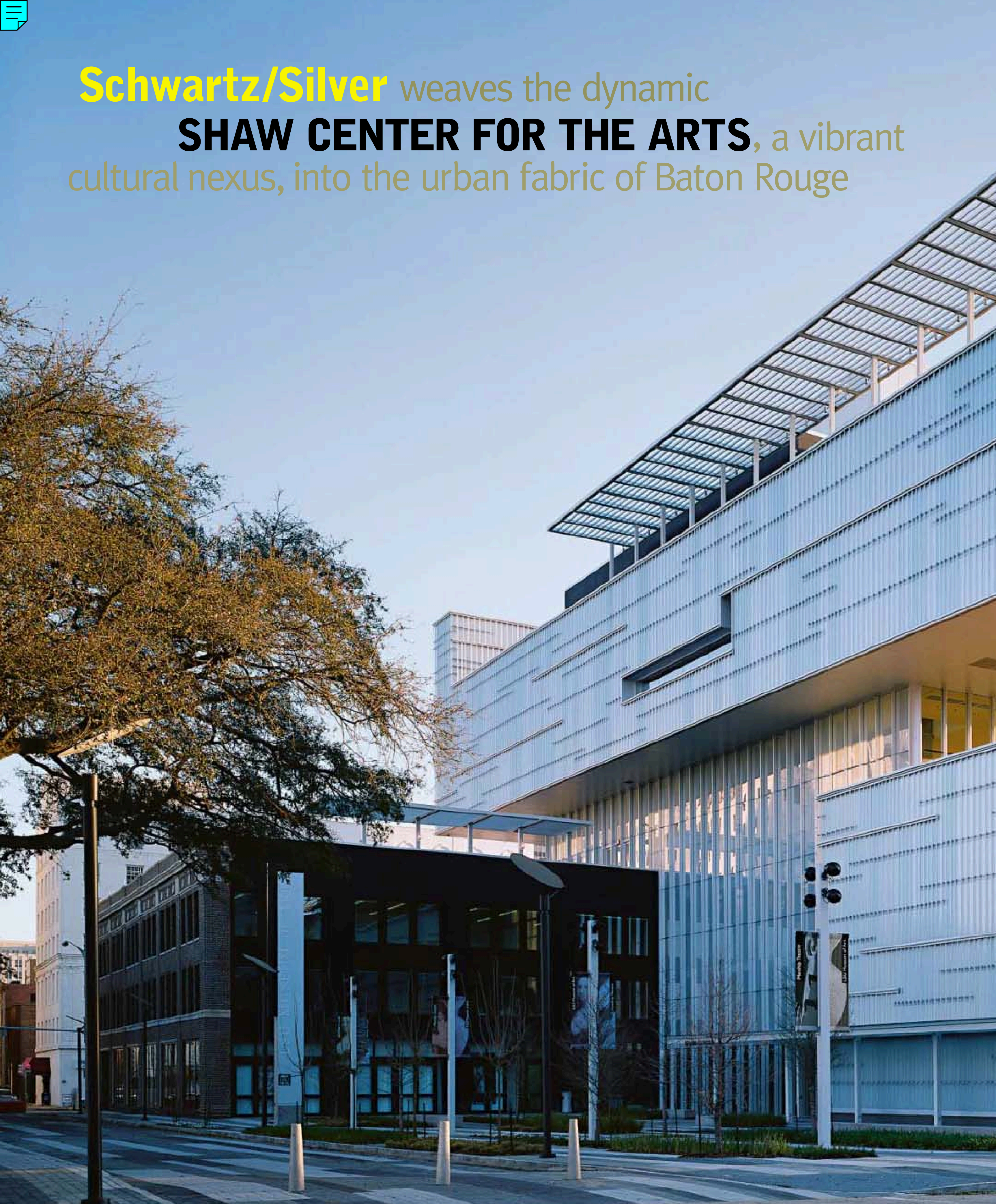
Wax-finished walnut flooring: *Bozo Company*

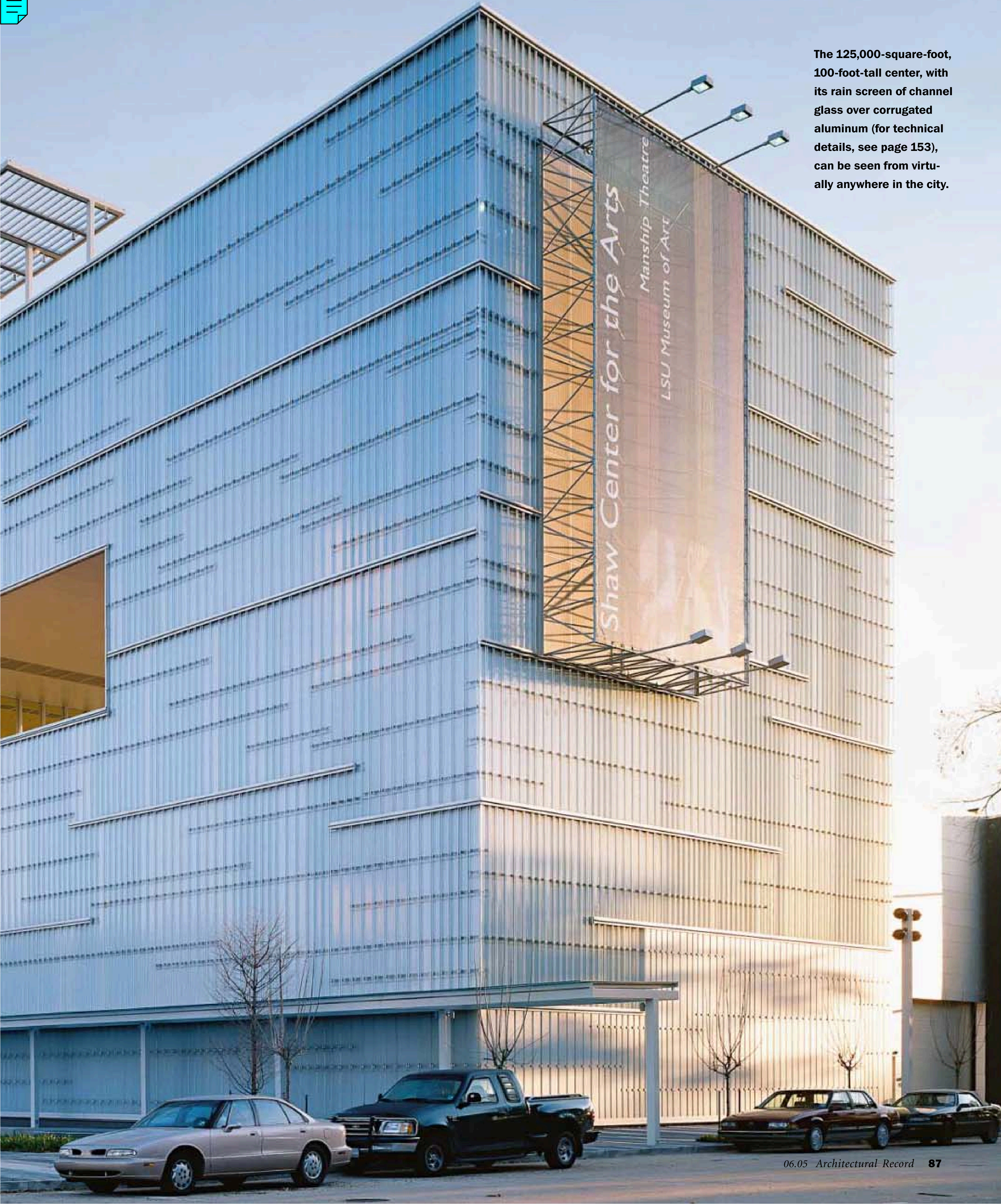
Wood showcases and niches: *Modar*

Display fixtures and showcases: *Custom by Toyo Ito & Associates*

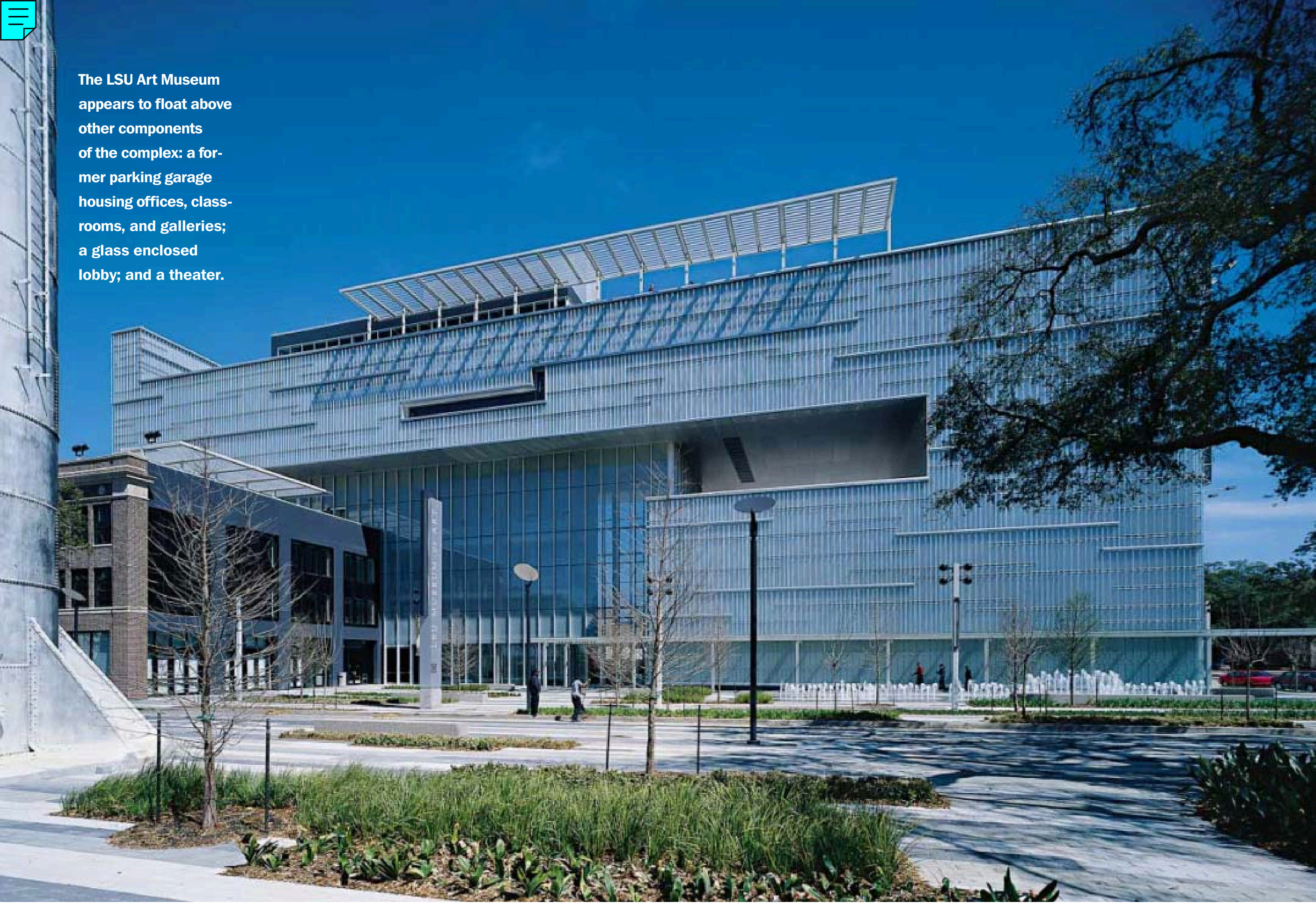
For more information on this project, go to Projects at **www.architecturalrecord.com**.

Schwartz/Silver weaves the dynamic **SHAW CENTER FOR THE ARTS**, a vibrant cultural nexus, into the urban fabric of Baton Rouge




Shaw Center for the Arts
Manship Theatre
LSU Museum of Art

The 125,000-square-foot, 100-foot-tall center, with its rain screen of channel glass over corrugated aluminum (for technical details, see page 153), can be seen from virtually anywhere in the city.



The LSU Art Museum appears to float above other components of the complex: a former parking garage housing offices, classrooms, and galleries; a glass enclosed lobby; and a theater.

PHOTOGRAPHY: © TIMOTHY HURSLEY

By Sam Lubell

Looking at Baton Rouge, Louisiana, from the rooftop of a local office building, one can understand why the city has long been overshadowed by its leafy suburbs, and by New Orleans, about 80 miles to the southeast. Dominating the view are boarded-up buildings, empty parking garages, and few signs of life. But looking west toward the old state capitol and the Mississippi River, one image emphatically counters this perception: the new Shaw Center for the Arts, designed by Boston-based Schwartz/Silver Architects with New Orleans–based Eskew+Dumez+Ripple.

The $35.7 million center, finished this March, is a vital component, and symbol, of a nearly $1 billion state and private investment in Baton Rouge (including museums, government buildings, condos, and restaurants) dedicated to restoring downtown's clout and popularity. Bridging the divide between a splashy "destination" arts building, stubbornly independent of its urban environment, and a discreetly contextual arts complex that fades into its surroundings, the center is a hybrid. It's still splashy—announcing downtown's modern reemergence with its gigantic, dynamic design. But it also meshes with the city, meandering through the urban fabric and luring investment through its abundant combination of cultural facilities. Sponsored by the state, the city, the Baton Rouge Area Foundation, and Louisiana State University, the complex contains LSU's Museum of Art, the 325-seat Manship Theater, two smaller rehearsal and performance spaces (contained in a separate wing), two restaurants, and—in an adjoining 1920s Art Deco parking garage called the Auto Hotel—small galleries, classrooms, and offices for local arts organizations.

Standing on the center's sixth-floor rooftop terrace on a breezy spring evening, it's easy to see why many locals consider it *the* place to be in town. The area's well-dressed sophisticates are out in droves, feasting on cajun-style sushi, and enjoying sweeping views of the river. The plan of the 125,000-square-foot, 100-foot-tall complex is predicated first on literally elevating the arts. The museum component—a lofty, free-flowing, 17,000-square-foot space containing painting and sculpture that reflects Louisiana's rich art tradition, as well as objects from across the globe—cantilevers over the Auto Hotel and spans via structural steel over a large, glass-curtain-wall-enclosed lobby and the warm, acacia-dominated theater. Because of space constraints on lower levels, placing the museum on the fifth floor was the only way to ensure an uninterrupted sequence of galleries. The building's height also maximizes views of the river, a new phenomenon in a city where

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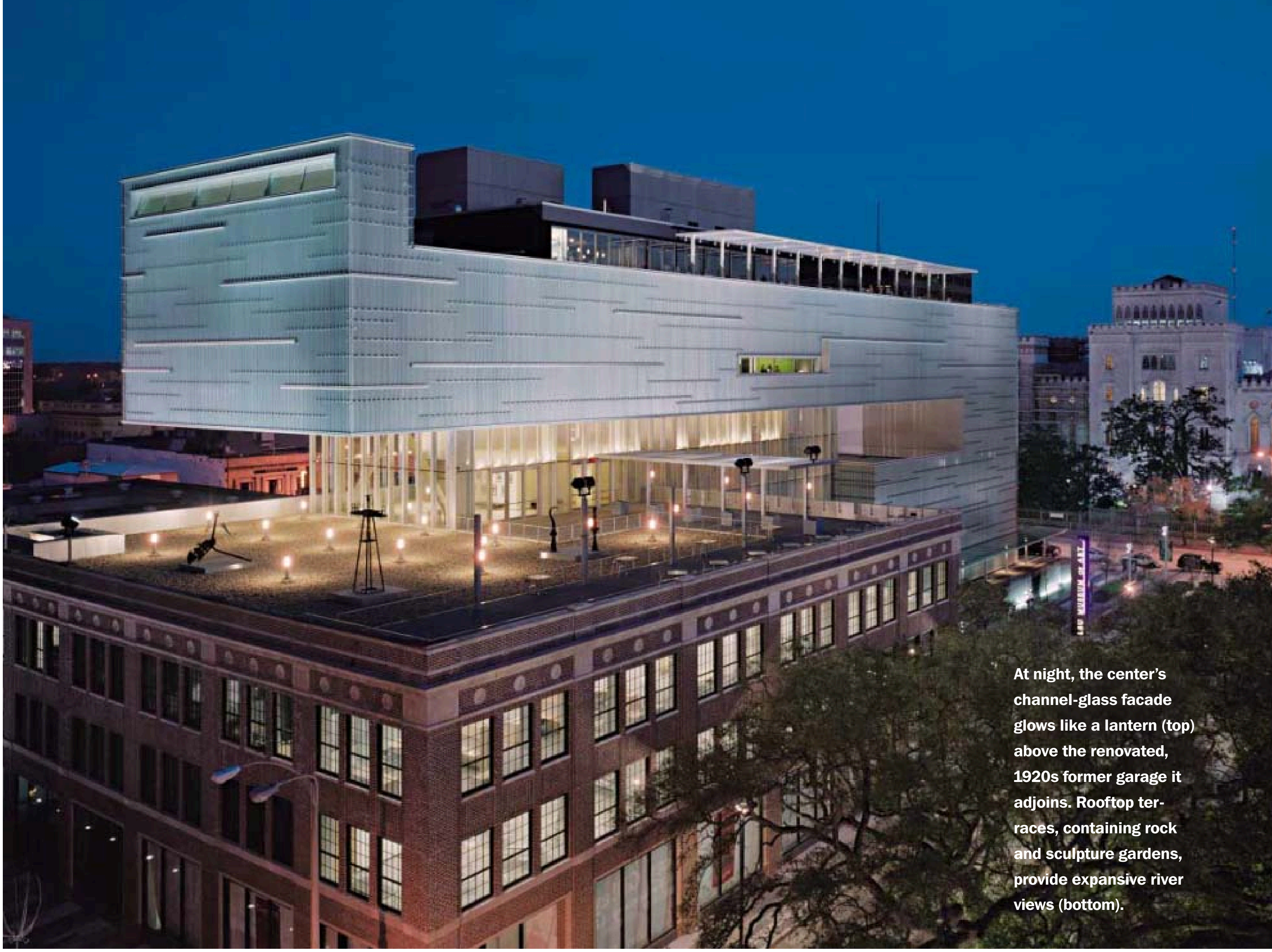
Project: *Shaw Center for the Arts, Baton Rouge, Louisiana*
Design architect: *Schwartz/Silver Architects—Warren Schwartz, FAIA, principal; Christopher Ingersoll, AIA, project manager; Philip Chen, AIA, project architect; Richard Lee, designer*
Executive architect: *Eskew+Dumez+Ripple*
Structural engineer: *McKee & Deville*

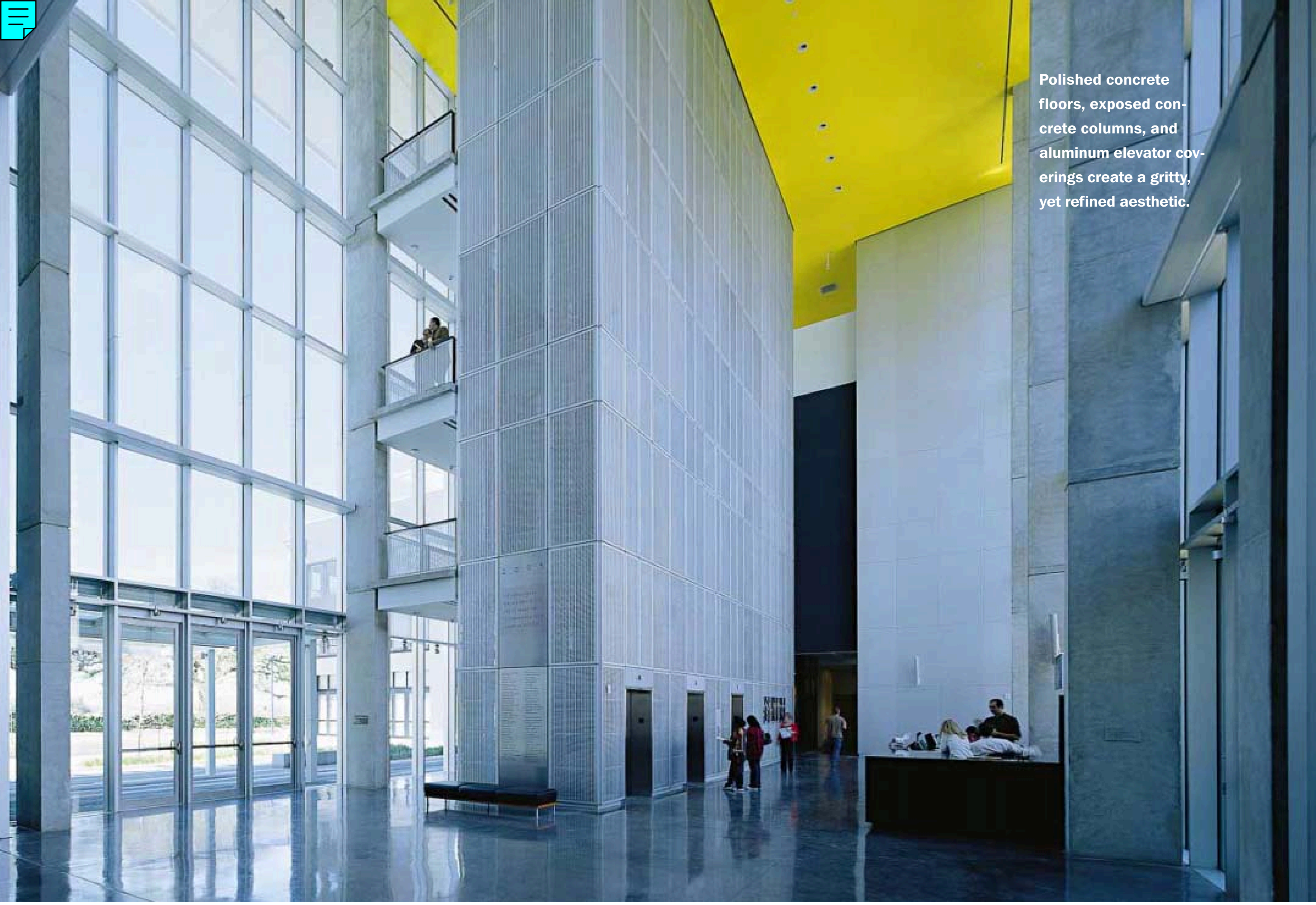


At night, the center's channel-glass facade glows like a lantern (top) above the renovated, 1920s former garage it adjoins. Rooftop terraces, containing rock and sculpture gardens, provide expansive river views (bottom).

industry, not cultural attractions, have long littered the Mississippi's shores. From many vantage points, the center seems to hover above its setting: small wonder it's commonly called the "flying saucer." Another popular nickname is the "stapler," derived from the building's bended shape, created first by a museum skylight to the north that reaches above the building's roofline, and last by a large void to the south that separates the museum from the theater. This shape breaks the center's monumentality (exaggerated by the windowless theater and museum) and helps lend the structure a meandering quality evocative of the river's contours.

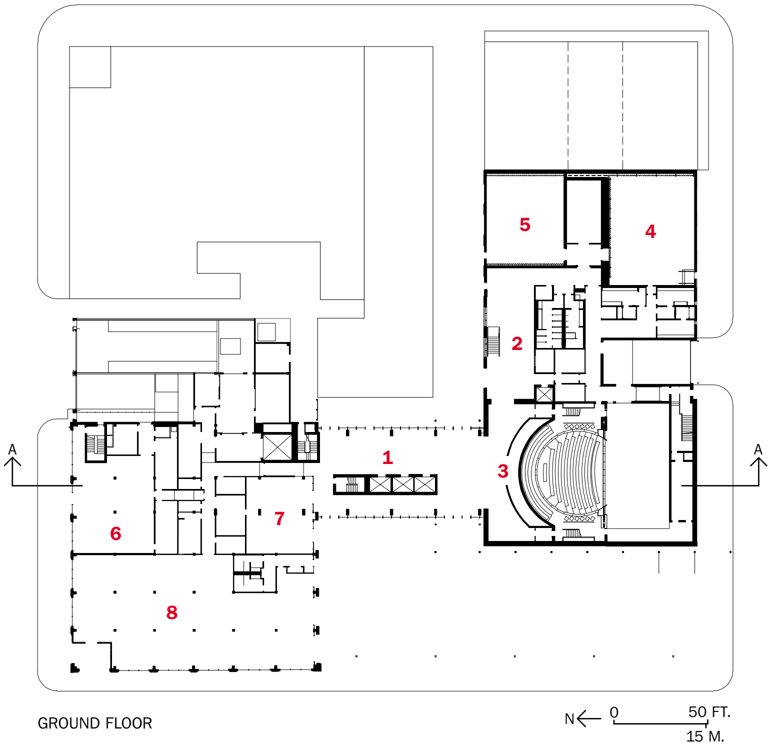
In order to enhance the connection with the river, and lend further intricacy to the building's monolithic form, the architects developed a glass skin for much of the complex that resembles the river's shimmering, rippled surface and colors (page 153). Acting as a rain screen in a climate known for heavy downpours and the occasional hurricane, the structure is composed of various-size greenish channel glass fitted over corrugated aluminum. It glistens in the sun and glows magnificently at night. The glass is further broken up (and braced) by randomly placed, different-size metal bands and channels that help create depth and suggest a lively outdoor artwork.

The stunningly Modern exterior has been a shock to many in this practical town ("Look at all that wasted space," says the superintendent of a nearby building), but many appear to have embraced the center as a fascinating, alluring addition, and a clear sign of the city's progress. "People were

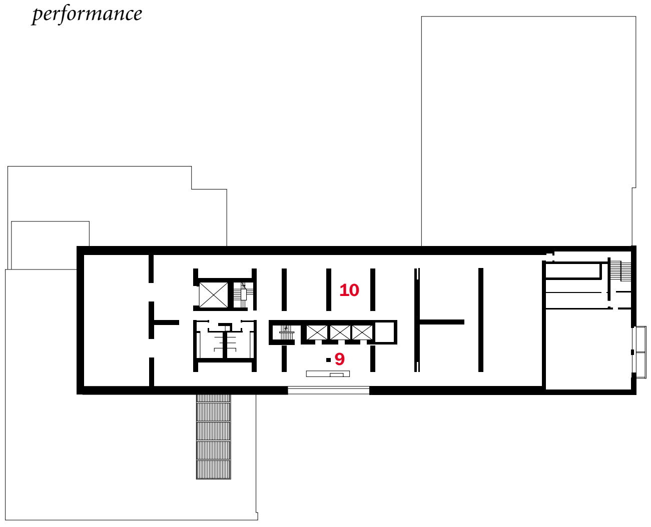


Polished concrete floors, exposed concrete columns, and aluminum elevator coverings create a gritty, yet refined aesthetic.

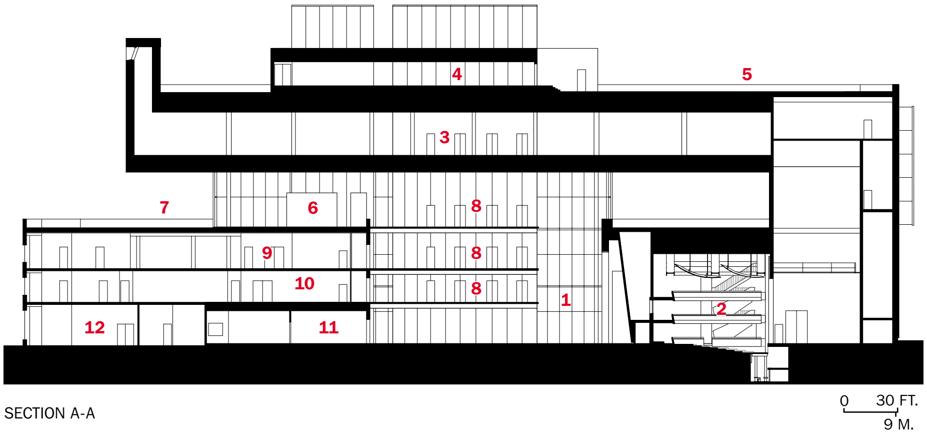
1. *Public lobby*
2. *Theater lobby*
3. *Manship Theater*
4. *Rehearsal/theater*
5. *Dance rehearsal/ performance*
6. *Gallery (LSU School of Art)*
7. *Museum store*
8. *Restaurant*
9. *Museum lobby*
10. *LSU Museum galleries*



GROUND FLOOR



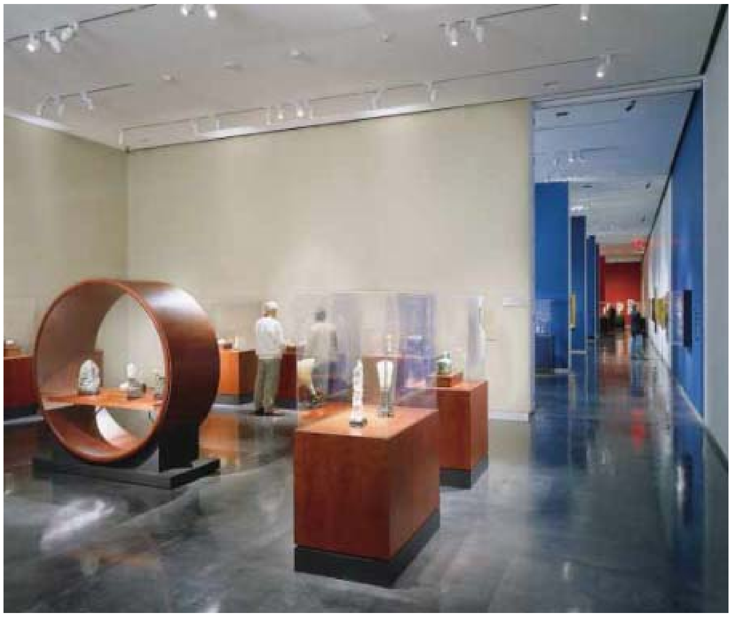
FIFTH FLOOR

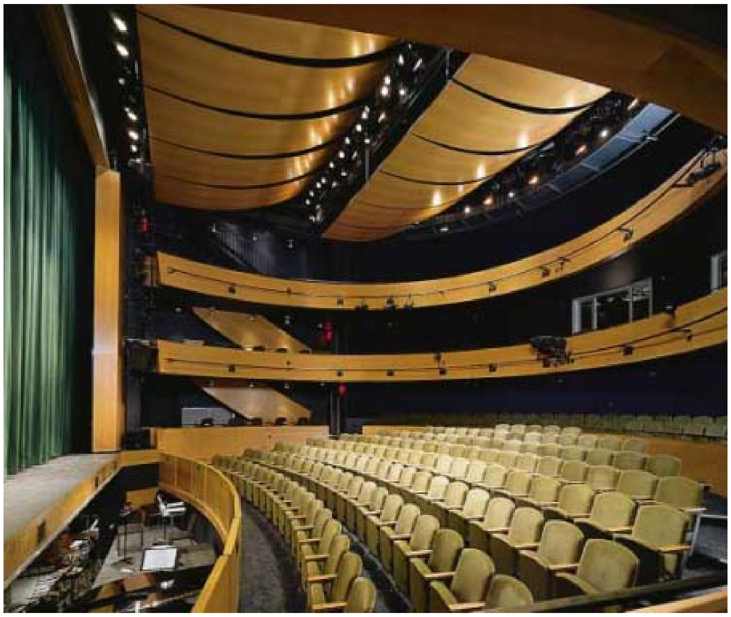


SECTION A-A

1. *Public lobby*
2. *Manship Theater*
3. *LSU Museum galleries*
4. *Restaurant*
5. *Public terrace*
6. *Sculpture garden lobby*
7. *Sculpture garden*
8. *Elevator bridge*
9. *Curatorial*
10. *Classrooms/offices*
11. *Museum store*
12. *Gallery (LSU School of Art)*

Free-flowing galleries in the LSU Museum of Art (below left) display art from the southern U.S., France, and England, as well as Native American and other cultures. The Manship Theater's warm acacia wood (below) creates an intimate atmosphere.





not content to stay stuck in the mud," says Schwartz/Silver principal Warren Schwartz, FAIA, whose firm was originally chosen through a Request for Proposals to design the LSU Museum in a faraway suburban location. Sensing a tidal shift, state and university officials decided instead to merge the project with a theater and arts incubator project under way downtown.

Inside, the center's spare, 65-foot-tall, 6,450-square-foot lobby heightens drama through its skyward thrust and flood of natural light, while visually connecting the center's many components. The architects, limited to a tight budget, kept things simple. Schwartz describes the aesthetic, which includes polished concrete floors, exposed-concrete support columns (encasing structural steel), and perforated-aluminum elevator and stairway coverings, not as "industrial" (a no-no in a town where grittiness is everywhere), but "more like a place where you make art than one where you see it."

Outside, the Shaw embraces the jumble of urban life, abutting existing restaurants and shops, which Schwartz says he urged local officials to keep. To the east, a narrow, building-lined open space extending from the center's lobby forms the "third street alley," where the Shaw's rehearsal/performance spaces are distinguished by their dark-gray stucco facades. To the west, a plaza, designed by Hargreaves Associates, incorporates fountains, a huge old water tower, and existing live oak trees. Its alternately light and dark paving echoes the turbulent overlap of forms on the complex's facade.

The rich combination of spaces inside and out is ultimately successful, although not without flaws. The center's greatest strength, its attention-getting size and shape, could also have been its worst enemy, but efforts to break up the massing and clearly articulate spatial connections are effective. Incorporation of the local environment makes the complex much better than a mere sculptural statement. Yet from some angles the huge building still appears awkward in its context. On foggy days, the exterior surface's luminosity gets murky, and the greenish tint can give it an office-building quality. And in the lobby, the spartan atmosphere, while commodious, needs to be complemented by more effective visual anchors. Yet these shortcomings are overshadowed by the building's most important feature: its ability to make everything around it better. Elizabeth "Boo" Thomas, executive director of local group Plan Baton Rouge, explains, "Once you experience this building, you start to notice all the other great things going on in town." ■

Sources

Metal/glass curtain wall: *BHN Corporation*

Glass: *Viracon*

Pavers: *Hanover Pavers*

Concrete: *Heck Industries*

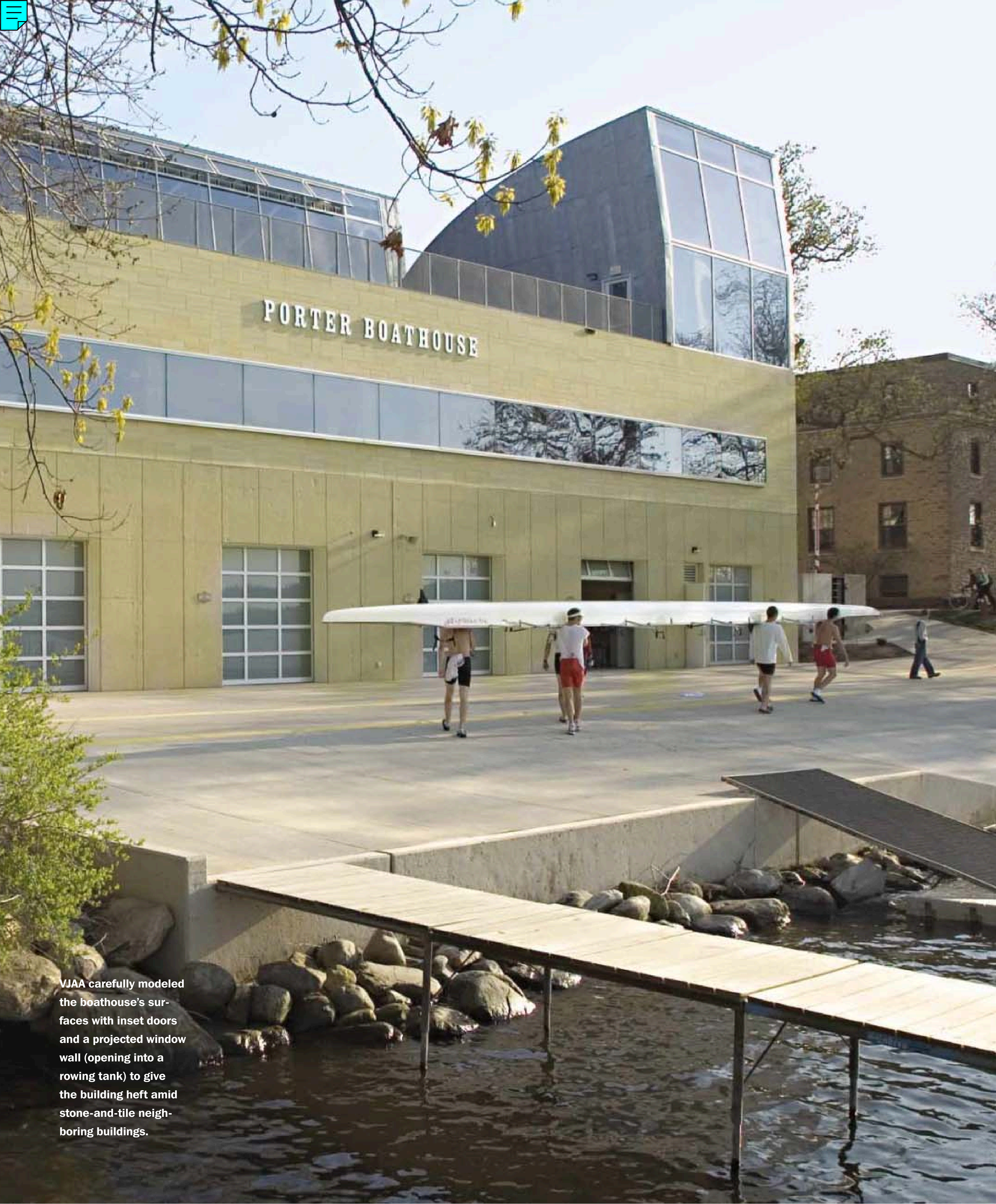
Built-up roofing: *Vaughan Roofing & Sheet Metal*

Aluminum: *EFCO*

Structural steel: *Steel Fabricators of Monroe*

Glass: *Viracon*

For more information on this project, go to Projects at **www.architecturalrecord.com.**

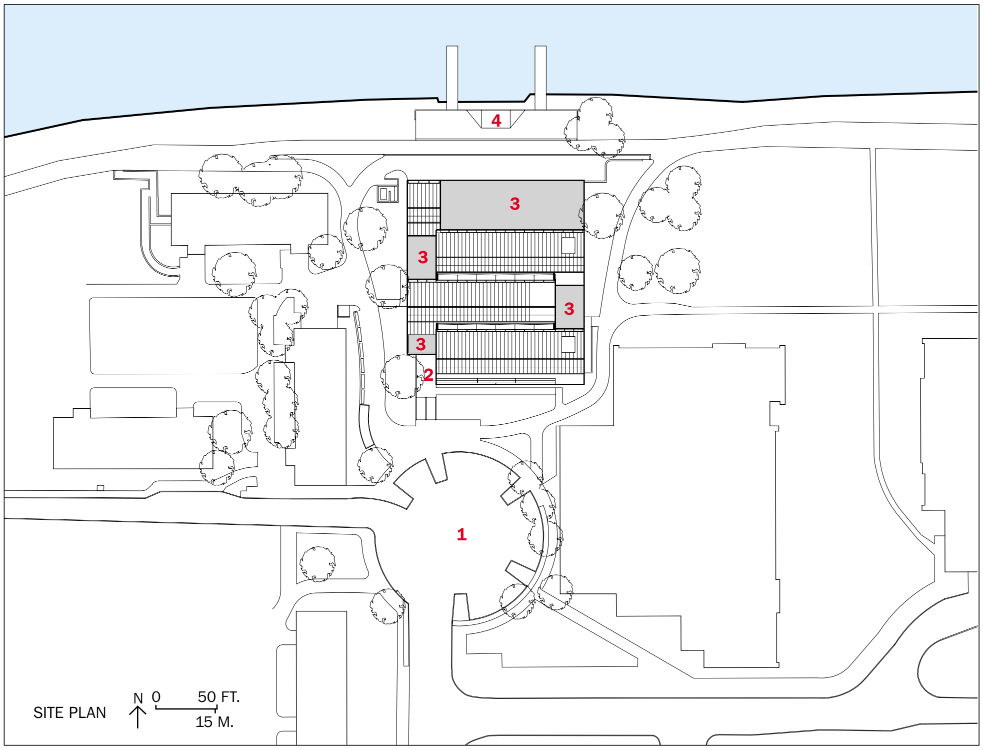


VJAA carefully modeled the boathouse's surfaces with inset doors and a projected window wall (opening into a rowing tank) to give the building heft amid stone-and-tile neighboring buildings.

With a deft use of form and materials, VJAA tucked the daylight-filled PORTER BOATHOUSE amid handsome older neighbors

By Nancy Levinson

Rowing is the oldest sport at the University of Wisconsin at Madison, and one of the most illustrious. In the past century, the school's varsity crews have won dozens of intercollegiate titles, and Wisconsin rowers were part of every U.S. men's and women's Olympic team from 1968 through 2000. This competitive record is especially remarkable given that for decades the university's rowers trained in a facility that all agree was egregiously inadequate: a one-story concrete boat-storage structure built in 1967 to replace a grand but dilapidated Shingle Style boathouse from the early 1900s. Never commodious, the structure was dated almost right away, when in the early '70s two women's crews more than doubled the program's size. "The old building was dark, dank, and very crowded," recalls Chris Clark, head coach of the men's team. "It was more like a bunker than a boathouse."



1. *Parking*
2. *Entry*
3. *Terrace*
4. *Boat-launch apron*

Today, memories of the bunker are fading fast: This spring, the rowing program moved into the $8.56 million, 52,000-square-foot, up-to-the-minute Porter Boathouse. Designed by Vincent James Associates Architects (VJAA) of Minneapolis with KEE Architects of Madison, the new structure is as sleek and elegant as a racing shell, with a no-nonsense program dedicated to storing boats and training rowers. Almost the entire 17,000-square-foot ground floor is taken up by a high-ceilinged space that can house more than 200 shells (ranging in length from 28 to 57 feet), as well as all the accoutrements of the sport (hundreds of oars, outriggers, boat slings, etc.). From this space, six garage-style doors open onto a poured-concrete apron and the shores of Lake Mendota. On the second floor are coaches' offices and team locker rooms, as well as a small lounge and a lobby where memento-packed display cases comprise a hall of fame of Wisconsin rowing. The most eye-catching space is the one that contains two moving-water, adjustable-current rowing tanks—valuable equipment in Madison, where the lakes are frozen for much of the winter.

The third level consists almost entirely of a large, light-filled space that can accommodate 150 rowing machines—enough for the entire program. "In the old building, we could fit only about 10 ergometers," says Clark. "Here, everyone can work out together, which is great, not just for training, but for team spirit." Sliding glass panels allow the space to be subdivided in three, according to the training needs of the crews (men's, women's, and light-weight women's); a north-facing terrace provides breathtaking views of Mendota, and in good weather, alfresco

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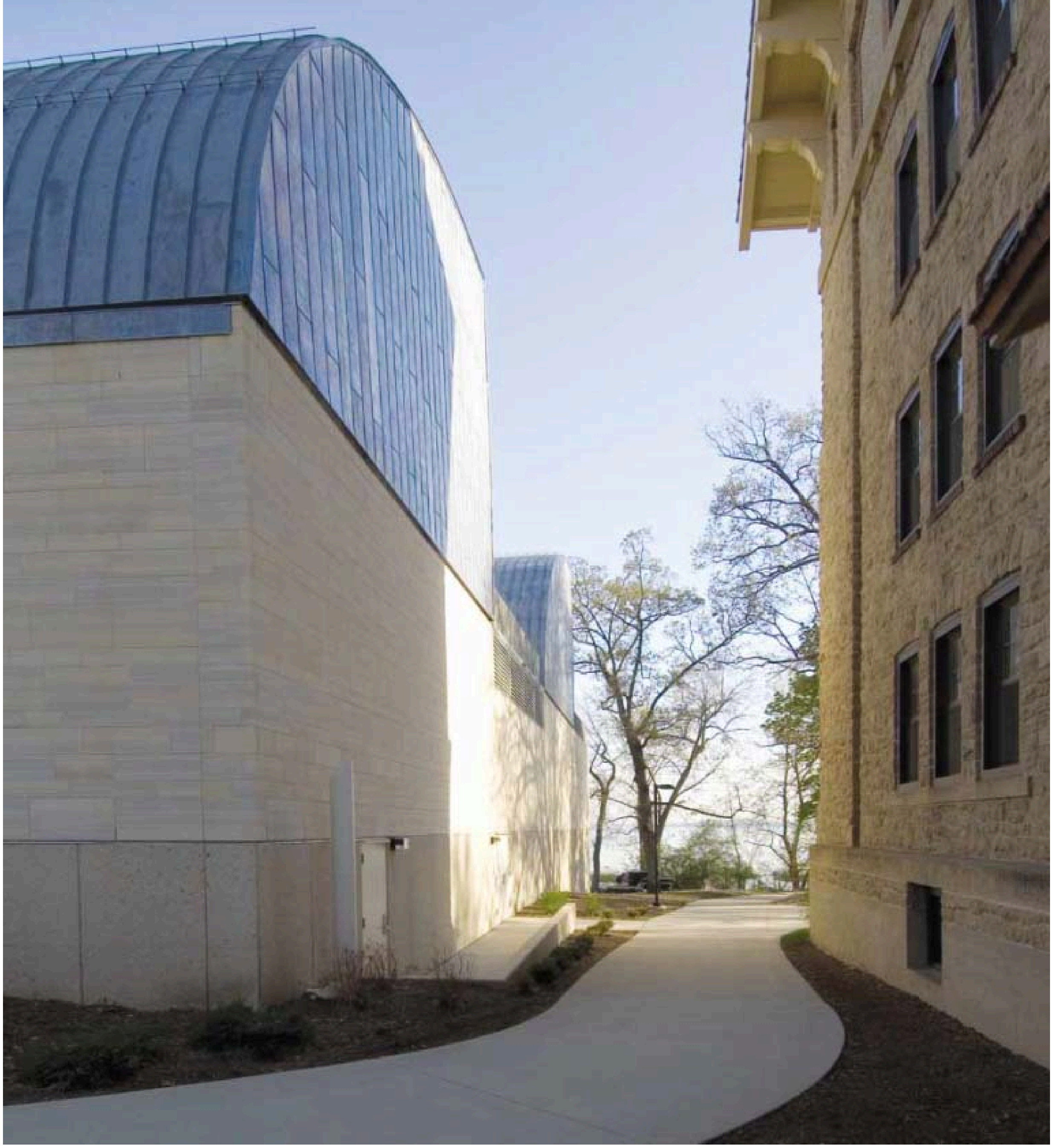
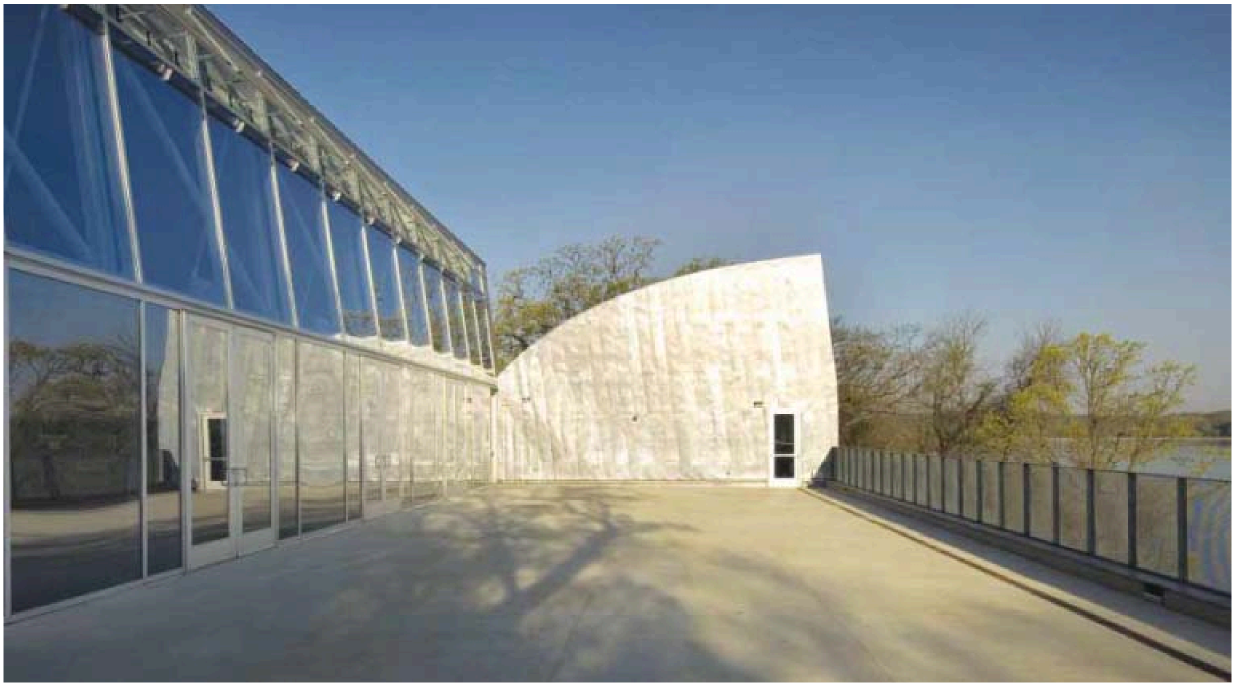
Project: *Porter Boathouse, University of Wisconsin-Madison*
Architect: *VJAA—Vincent James, FAIA, Jennifer Yoos, AIA, Nathan Knutson, AIA, Andrew Dull, Chris Wegscheid, AIA, Lev Bereznycky, Steven Philippi, Paul Yaggie, AIA, Donovan Nelson, Bob Loken, Karen Lu, Carl Gauley, Dzenita Hadziomerovic*
Architect of record: *KEE Architects—David Ewanowski, AIA, Jan Eymann, Douglas Kozel, AIA, Kandy Brouchoud, Peter Crennell, AIA, Paul Cuta, AIA, Rick Gabriel, AIA, Sohail Khan, Assoc. AIA, Linda Page, Michael Zuehlke, AIA*
Consultants: *Strand Associates (structural, civil); KJWW Engineering (m/e/p); Ken Saiki Design (landscape); Jeff Peterson, AIA (rowing)*
Contractor: *Miron Construction*

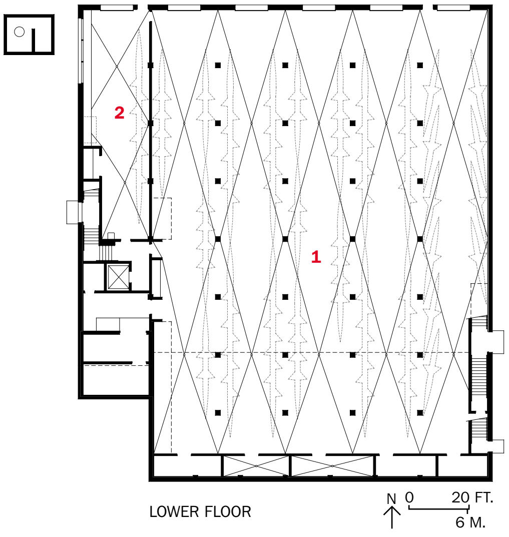
Nancy Levinson, a RECORD contributing editor, lives in Boston.

PHOTOGRAPHY: © ZANE WILLIAMS, EXCEPT AS NOTED



The new rowing center, set on the site of its predecessor, frames tight vistas to Lake Mendota (left). Above an austere base of concrete surmounted by limestone, the architects created a sail-like silhouette in metal (opposite). Offsetting each monitor in plan encourages a play of light. Landside entry is on the second floor, above the boat-storage level, and beneath the daylighted, workout room (plans, opposite). A top-level terrace opens to the lake (bottom).

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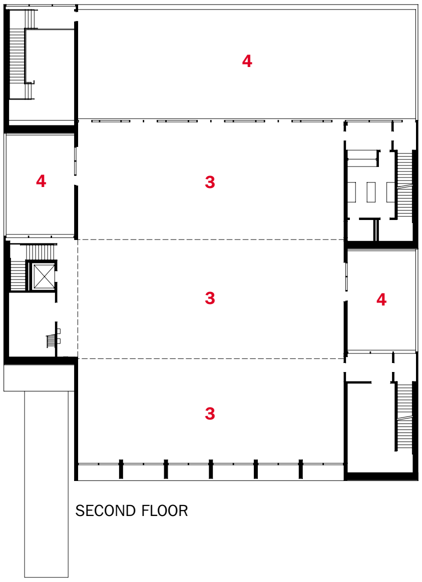
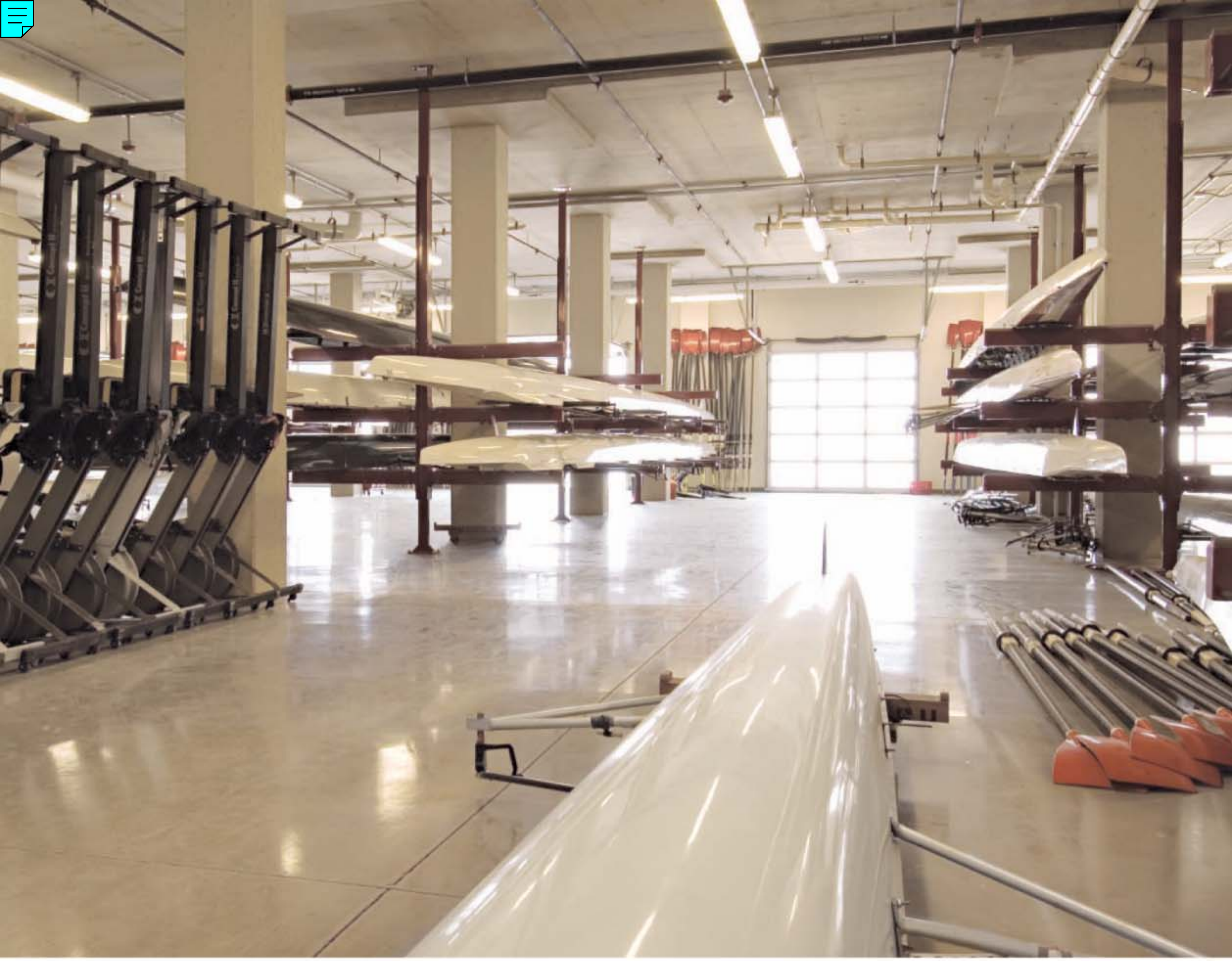
LOWER FLOOR



SECOND FLOOR

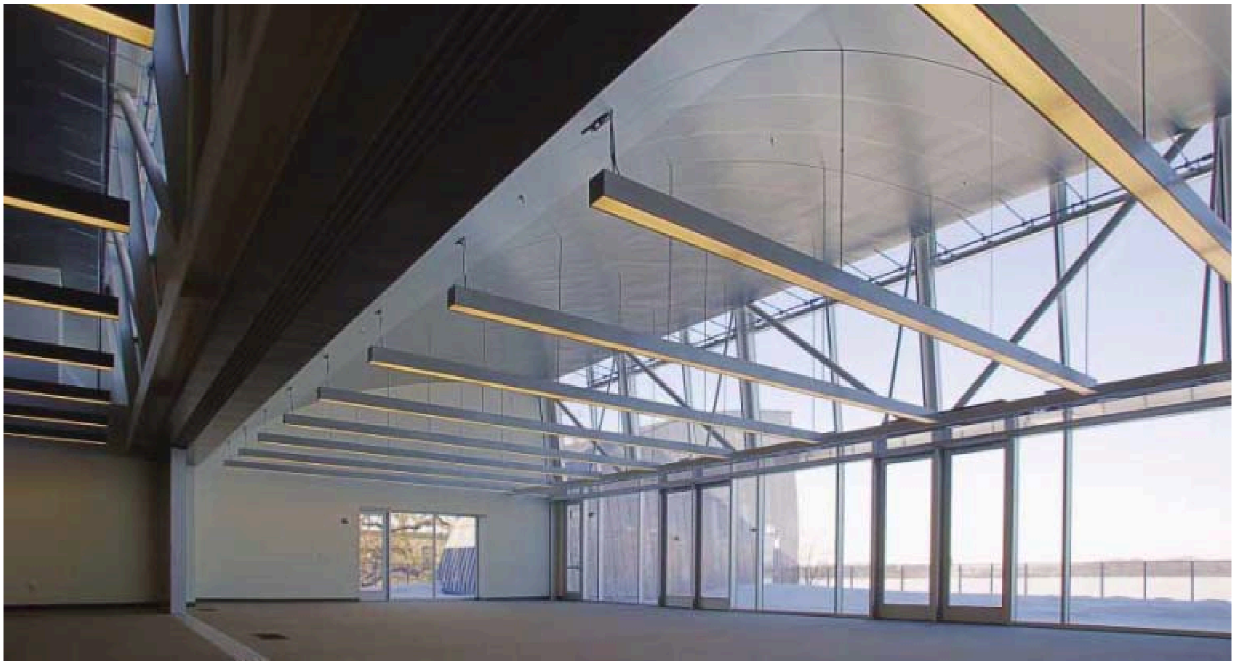
1. *Boat storage*
2. *Boat repair*
3. *Workout*
4. *Terrace*



workout space. Saw-toothed monitors with operable windows bring light into the middle of the room; they also enhance ventilation in the un-air-conditioned space, which becomes a true athlete's "hot box" when those ergometers are all whirring.

The design principals, Vincent James and Jennifer Yoos of VJAA, are especially pleased that the university was receptive to a contemporary-style boathouse. (One of the firm's earlier projects was the Modernist Minneapolis Rowing Club Boathouse, on the banks of the Mississippi.) James remembers a sentiment early on to mimic adjacent structures—mostly four-story dormitories built in the '30s, with stone walls and red-tiled, hipped roofs with deep eaves. James convinced the client that this particular idiom, given both the tight site (exactly where

A CONTEMPORARY FORM USING TRADITIONAL MATERIALS WON OVER AESTHETIC SKEPTICS.



Translucent doors daylight boat-storage and repair bays on the ground floor (opposite, top). The top floor, now filled with ergometers (not shown in these early photos), offers a workout area that faces views of Lake Mendota (bottom). South-facing windows are inset (top). Sidelighting is balanced by toplight from clerestories, which vent heat generated by rowers. Operable windows (opposite, bottom) supply fresh air. To share its long horizontal loads with the vault, the window wall gently cants.

PHOTOGRAPHY: © DON WONG

the earlier boathouse had been) and the space needs of the program, would make the boathouse look like a bloated version of a fast-food franchise. "We made a model with a hipped and tiled roof," he says, "and because we felt the point was important, we even added Burger King signage." The three-dimensional argument was so convincing, says Alan R. Fish, Wisconsin's vice chancellor for facilities and planning, "that it had us looking for the drive-through window." The hipped roof was history. The design has drawn praise even from early skeptics. It didn't hurt, Fish notes, that the architects chose materials—poured concrete and limestone for the walls, tern-coated copper for the scooped roofs—that complement the surrounding masonry architecture and echo the metal roof of the nearby university observatory. "Those of us who favored the nontraditional approach," says Fish, "were able to argue that the new boathouse was not trendy, but timeless." And ultimately the building itself has proved the strongest argument. "When I saw the proposal, I thought the design looked cold and austere," says the women's head coach, Bebe Bryans. "But the building itself is anything but—it's very warm and welcoming, a fantastic environment for both working and working out."

Coach Clark views the new boathouse as crucial not just to maintaining but improving Wisconsin's record. "Because rowing is an endurance sport," he says, "there's a tight correlation between training time and ultimate performance." A lousy facility can make the strenuous regimen feel even tougher. Adds Clark, "I expect that in the next couple of years we'll see the advantages of the new place reflected in our results." ■

Sources

Exterior stone: *Anamosa limestone*

Roofing: *Una-Clad (terne-coated copper); Firestone (EPDM)*

Curtain wall, windows, entrances: *Vistawall*

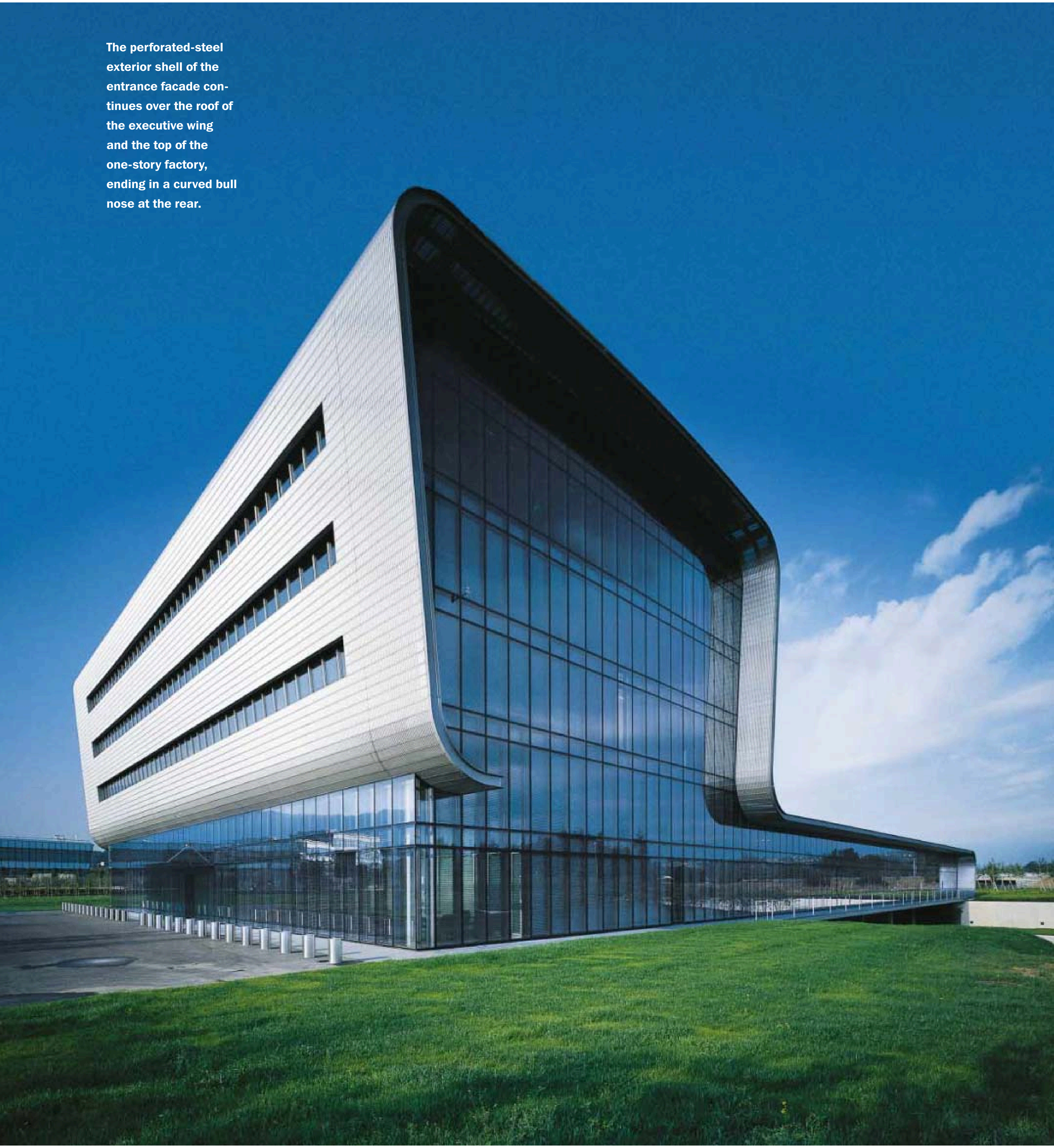
Glass, glazing: *Interpane; Oldcastle Glass Wausau*

Overhead doors: *Arm-R-Lite*

Epoxy terrazzo: *Terrazzo & Marble Supply*

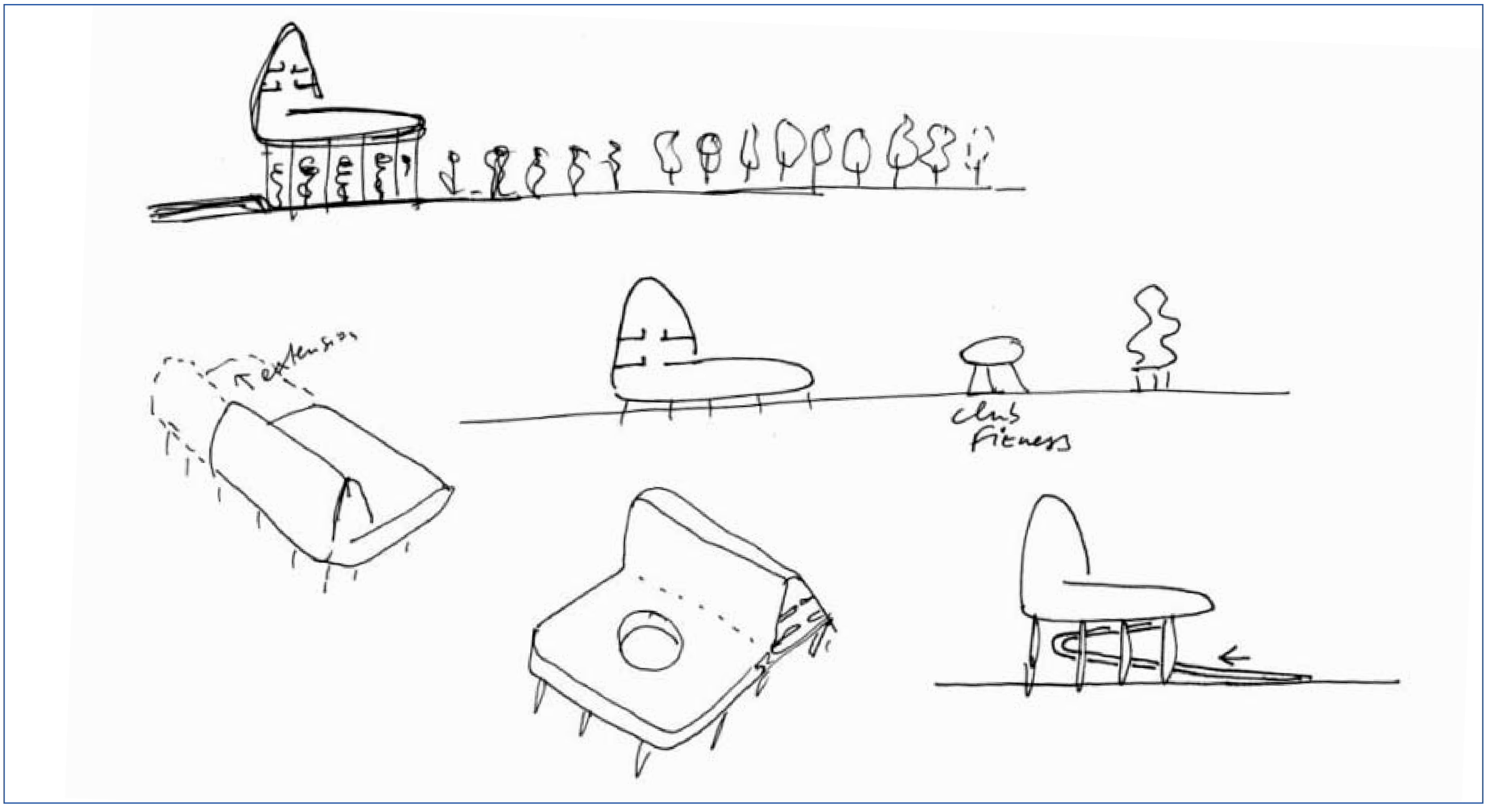
Lighting: *Cooper*

For more information on this project, go to Projects at **www.architecturalrecord.com**.



The perforated-steel exterior shell of the entrance facade continues over the roof of the executive wing and the top of the one-story factory, ending in a curved bull nose at the rear.

Bernard Tschumi's sleek, curvilinear skin heightens the profile of the VACHERON CONSTANTIN HEADQUARTERS AND FACTORY outside Geneva



By Suzanne Stephens

PHOTOGRAPHY: © CHRISTIAN RICHTERS, EXCEPT AS NOTED

Turning to architecture to help beef up a company's corporate identity seems to be an obvious strategy. You only need to look at Manhattan's Woolworth, Chrysler, and Seagram Buildings to see how this has worked smashingly well in the past. But these are skyscrapers. If the company is moving to a light industrial zone near Geneva, Switzerland, it means making an impact with less height in an amorphous landscape of highways and factories.

The Vacheron Constantin Headquarters and Watch Factory at Plan-les-Ouates demonstrates, nevertheless, that such image enhancement can be done with a showy, sophisticated finesse. Designed by Bernard Tschumi, a Swiss-born architect with offices in New York and Paris, the tautly crafted carapace of shiny, perforated steel seems to float above a town also staked out by Piaget, Rolex, and Patek Philippe.

On a relatively flat, 7-acre site, the sinuously curved, shimmering, 130,000-square-foot form rises above a grassy lawn to a four-story height. Executive offices for 90 fill 85,000 square feet of the space, before the structure drops down to a single story housing a 47,000-square-foot factory for 80 watchmakers. (The building is designed to accommodate 250 in the future.) Since many employees drive to work, Tschumi placed the parking along a slope planted with trees, and scooped out the ground underneath the factory to provide additional parking. As a result, the complex seems to levitate above the earth yet still be anchored in it.

Tschumi's concept sketches (above) illustrate how he brought together the headquarters and factory partis.

Founded in 1755, Vacheron Constantin can claim to be the oldest continuously running watchmaker in the world. (You only need glance at its costly and highly labor-intensive watches to know this isn't Swatch.) The company, now part of Richemont International, a tobacco and luxury goods empire that also owns Cartier, decided it should consolidate its management, marketing, and production under one roof. The new building would not only bolster the watch company's image in relation to other high-profile competitors, but would do so in a way that would presumably encourage interaction and communication among the employees. The move would mark the

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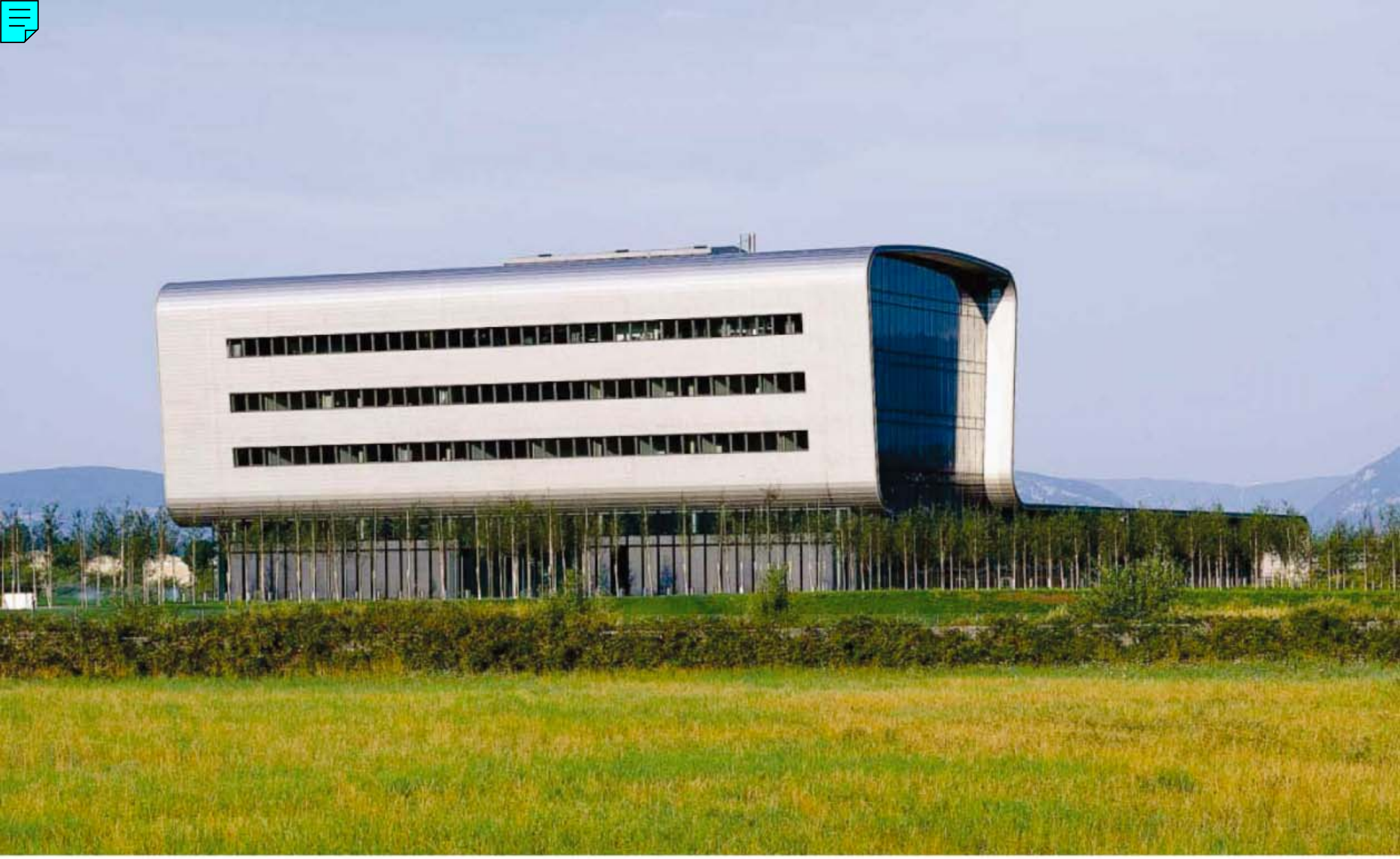
Project: *Vacheron Constantin Headquarters and Watch Factory, Plan-les-Ouates, Geneva, Switzerland*

Architect: *Bernard Tschumi Architects (New York); Bernard Tschumi urbanistes Architectes (Paris)—Bernard Tschumi, Véronique Descharrières, partners in charge; Joel Rutten, Alex Reid, project architects*

Owner: *Vacheron Constantin, Richemont International*

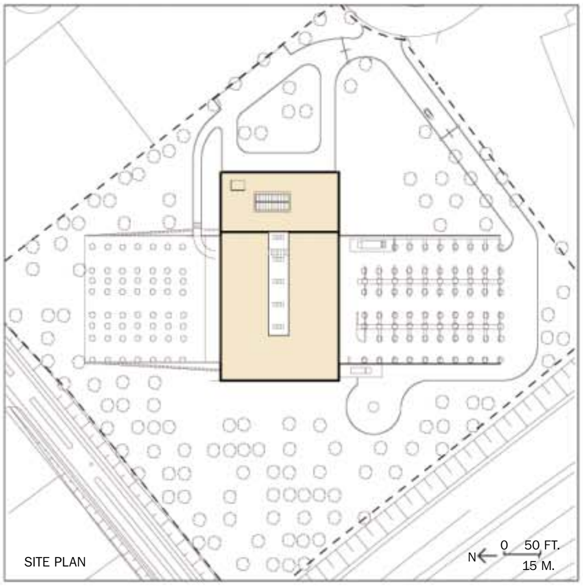
Engineer: *Arup and SGI (structural); Arup and Enerconom (mechanical and HVAC)*

Landscape: *Michel Desvigne*



1. *Entrance lobby*
2. *Atrium*
3. *Administrative offices*
4. *Mechanical space*
5. *Covered parking*
6. *Indoor court*
7. *Kitchen*

The main (visitors') entrance to Vacheron Constantin faces east (above and opposite, top), where the triple-glazed base barely hints at the atrium within.


SITE PLAN
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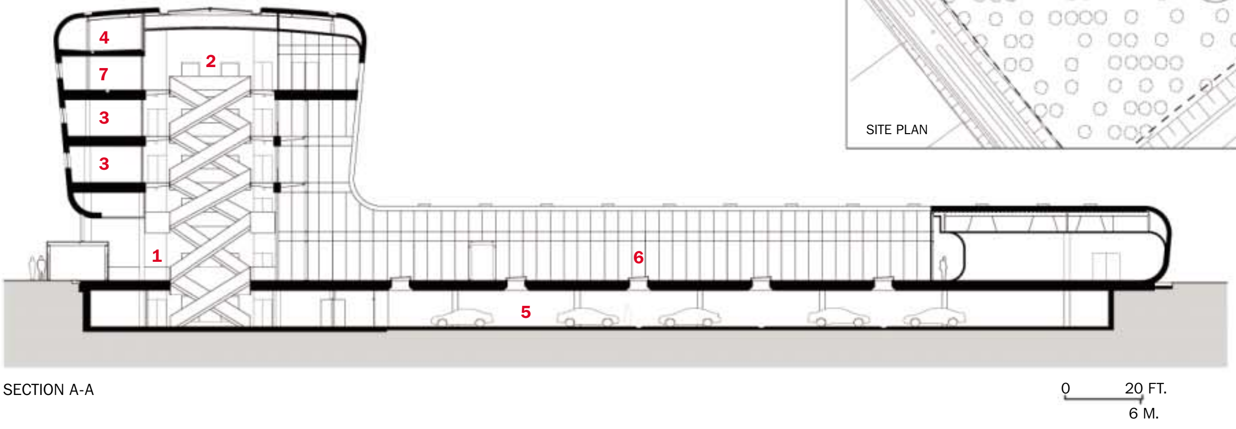
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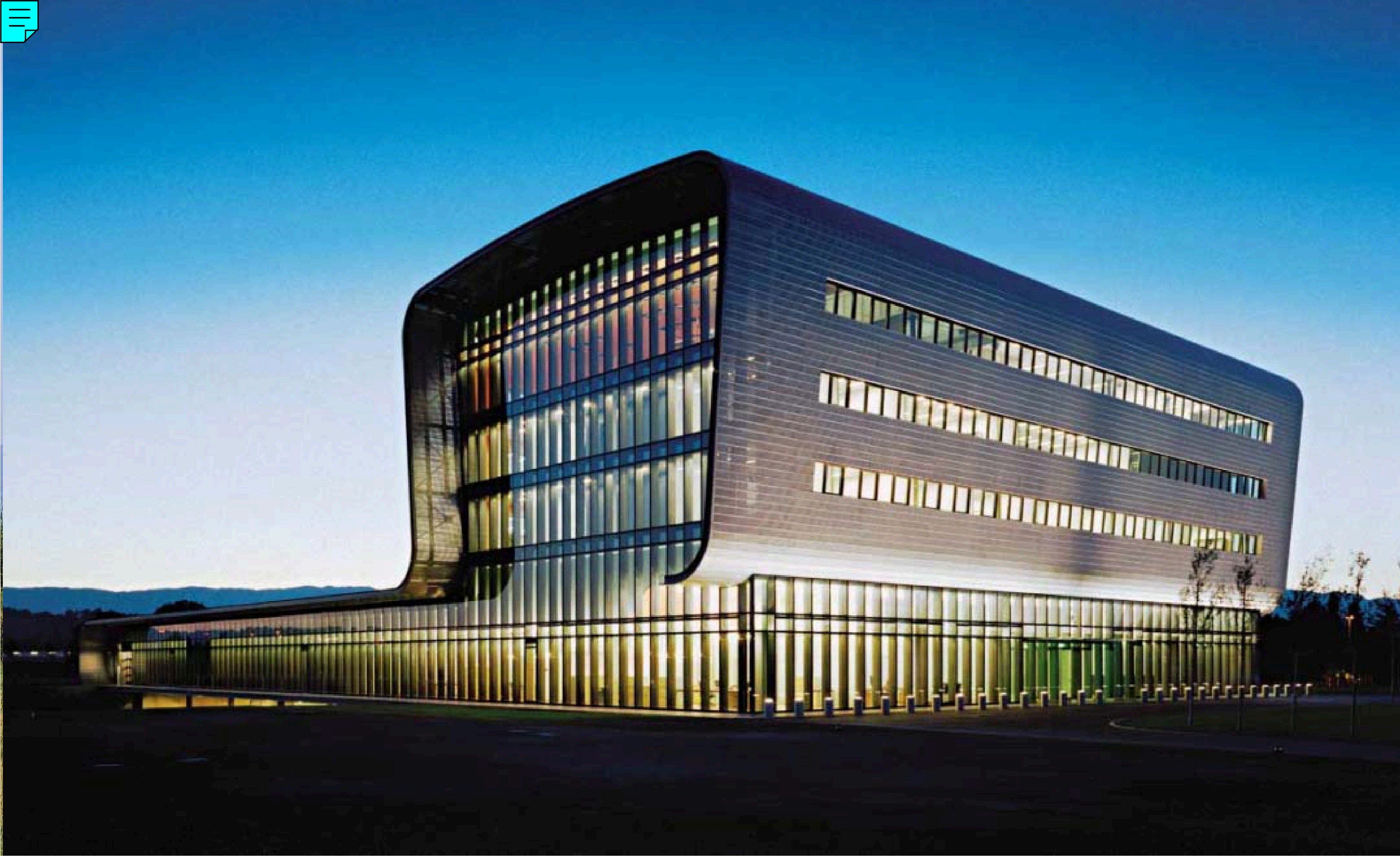
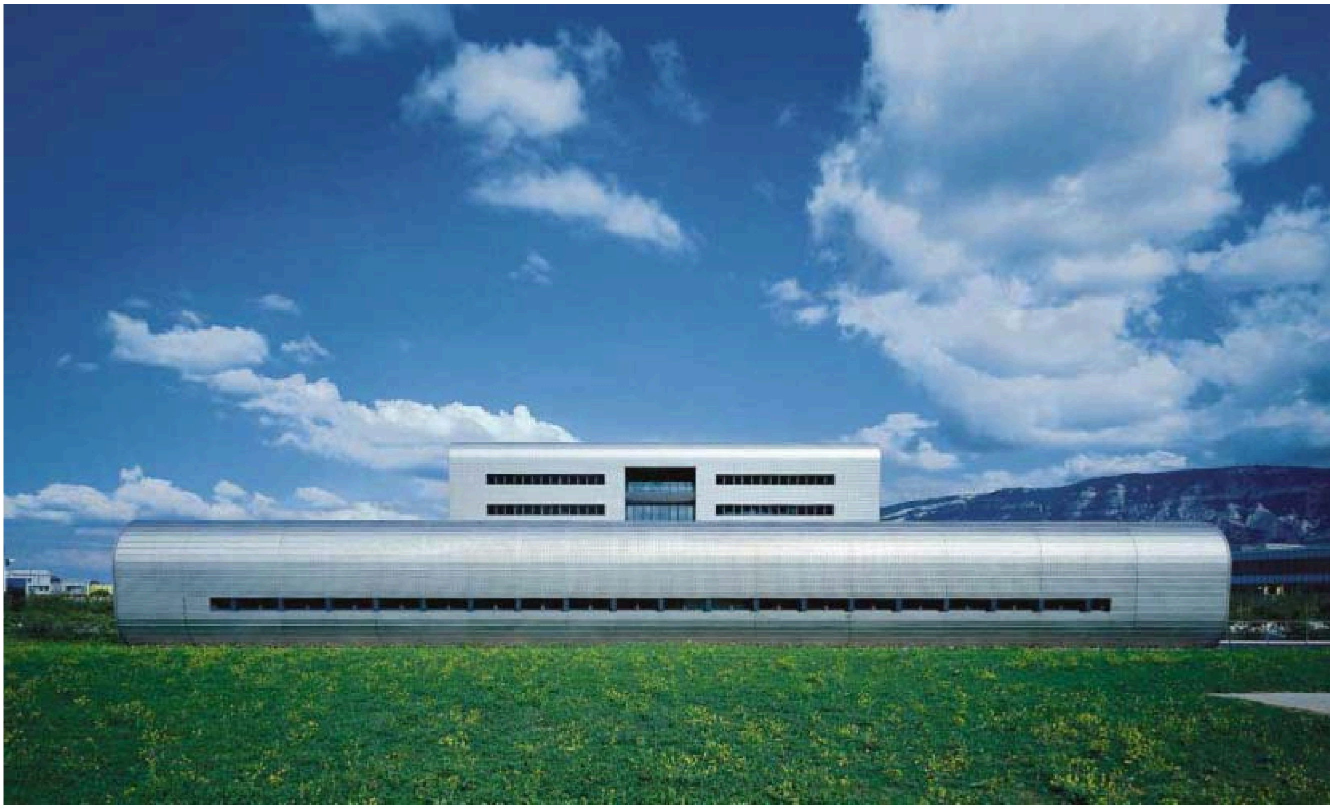
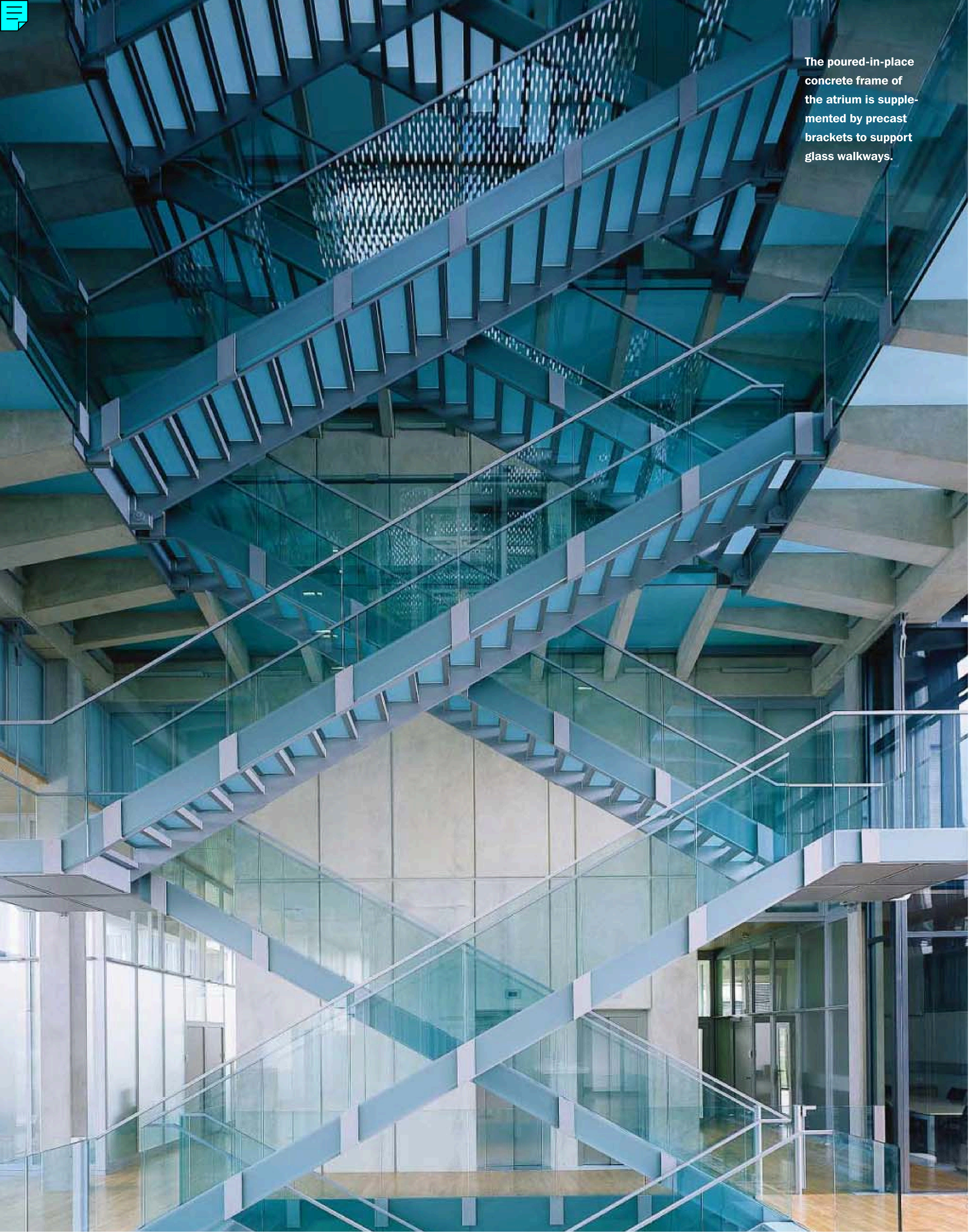
PHOTOGRAPHY: © PETER MAUSS/ESTO (OPPOSITE, TOP)

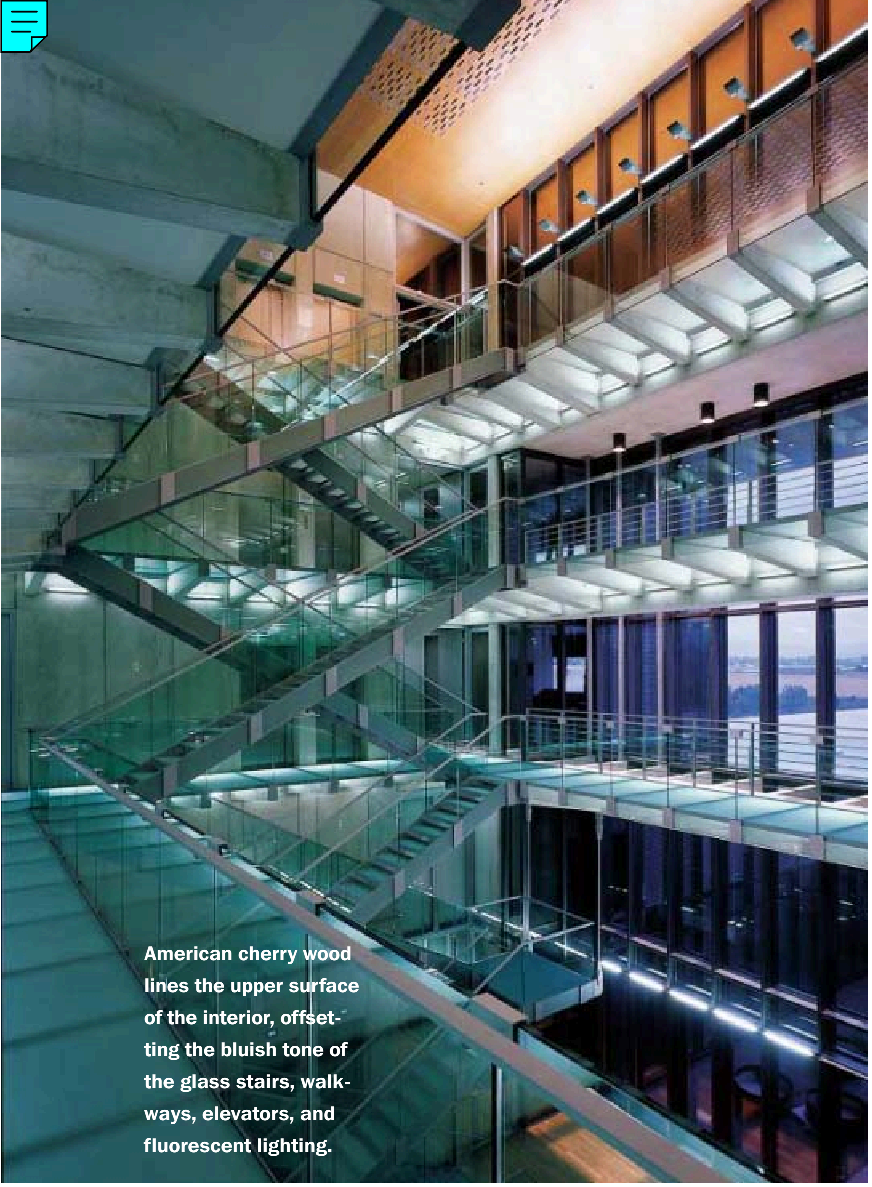


Executive offices are enclosed by full-height glass curtain walls on the north and south facades (above). Landscape architect Michel Desvigne planted trees in a sloping parking lot, which continues (without the trees) under the factory.

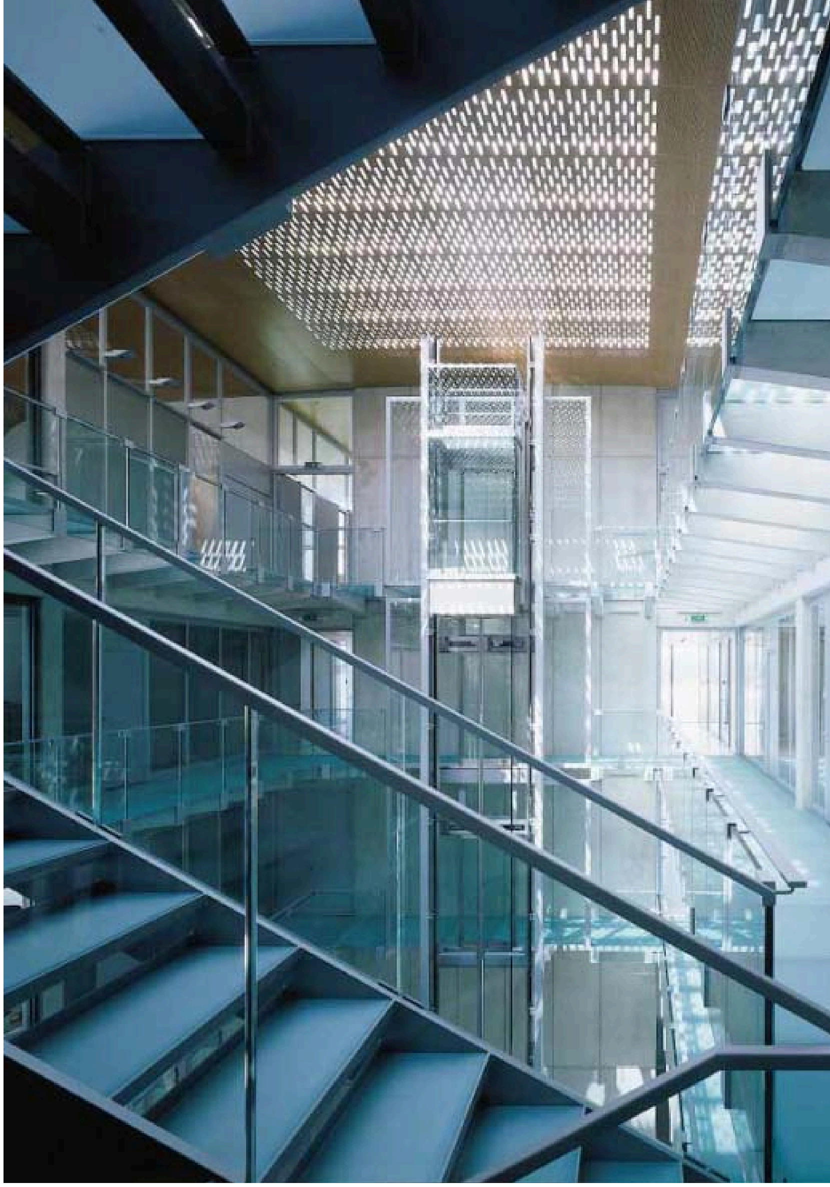




The poured-in-place concrete frame of the atrium is supplemented by precast brackets to support glass walkways.



American cherry wood lines the upper surface of the interior, offsetting the bluish tone of the glass stairs, walkways, elevators, and fluorescent lighting.



company's 250th anniversary.

The jury, led by Alain-Dominique Perrin, the former Cartier C.E.O. who was instrumental in realizing Jean Nouvel's design for Cartier Foundation in Paris (1994), invited Tschumi and four other architects—Nicholas Grimshaw and John Paulson of England, Gae Aulenti of Italy, and Spanish architect Carlos Ferreter—to develop schemes for a building that would unmistakably announce the quality of its product—past and future. Tschumi and Paulson, the two finalists, came up with pared-down schemes. But only Tschumi's exploited the sheen, curves, and complex joinery evocative of Vacheron Constantin's own casings, wristbands, and watch faces with a design where roof and walls are melded into one steely surface encompassing the two-part program.

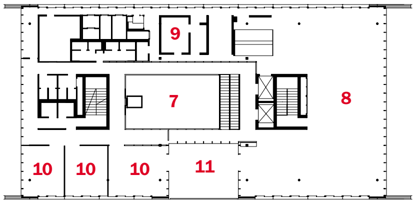
Although in his most recently published book, *Event-Cities 3: Concept vs. Context vs. Content* (MIT Press), Tschumi contends that "Concept, not form, is what distinguishes architecture from mere building," you want to argue that the concept—or the idea—of a continuous surface joining two programs is certainly revealed by form. Under this curved, perforated-steel shell, Tschumi brought together two partis evocative of historic examples of American Modernist workplace architecture: offices arranged around an atrium, seen in the Ford Foundation Headquarters in New York (1968), by Kevin Roche John Dinkeloo, and the horizontal slab of work spaces arranged around an interior court, found in the American Can Building in Greenwich, Connecticut (1970), by Gordon Bunshaft of Skidmore, Owings & Merrill. Although executives and watchmakers go to separate quarters, they both use the atrium to meet in the buffet restaurant on the fourth floor.

While the curvilinear steel casing fluidly wraps exterior walls and roof (including the horizontal factory roof, where a pan installed below the perforated-steel covering catches and drains rainwater), Tschumi has not tried to make it appear to grow organically out of the stalwart concrete frame underneath. Indeed, the metal skin rests on a steel frame at the top of the poured-in-place concrete structure. You can distinguish the skin from the frame as you can the executive offices from the factory in a dialectic between the container and the contained.

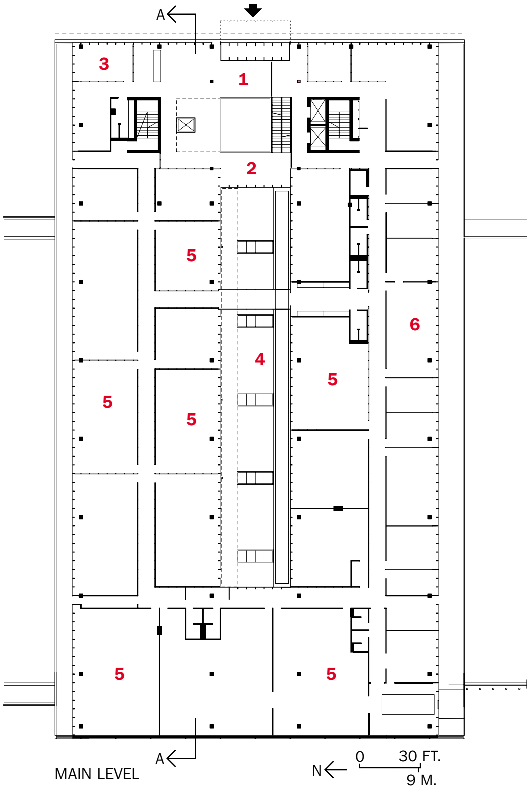
The muscularity of the concrete structure in the atrium offers an arresting counterpoint to the lightness, transparency, and translucency of the glass stair treads, walkways, and walls: Again, the duality in materials between the stolid and the ethereal gives the hall its dramatic presence. Tschumi also lined the casing's curved underside in American cherry wood. Its warm reddish hue emanates through the atrium's interior, offsetting the bluish fluorescent lighting.

In the factory where the craftspersons put together the watches, make adjustments, or provide after-sales service (another facility in Vallée de Joux is devoted to the development of movement, finishes, and surface treatment), the program called for light and superclean surfaces. The workstations in the one-story wing receive daylight

Glass walkways (below) on the west side of the atrium overlook the factory. Watchmakers enter the factory from the parking level, where they stow their coats before ascending to the air locks upstairs, where they don white smocks and slippers for the dust-free workshops (bottom). Here, ventilation, temperature, and humidity controls are stringent for the 80-person ateliers. A conference room on the northeast corner of the ground-floor entrance facade of the administration building features wood floors and ceiling with views out to the landscaped lawn through glass curtain walls (opposite).



TOP LEVEL



MAIN LEVEL

1. *Lobby*
2. *Exhibition*
3. *Conference room*
4. *Interior courtyard*
5. *Workshops*
6. *Technical offices*
7. *Atrium*
8. *Restaurant*
9. *Kitchen*
10. *Private dining rooms*
11. *Outdoor terrace*

through north-facing glass walls, while two banks of workrooms look onto an interior glassed-in court. Since the workrooms must be completely dust free, the plan of the one-story portion includes air locks, or sealed vestibules, glassed-in corridors, and dressing rooms for putting on lab coats and protective shoe coverings.

The success of the building's imagery owes much to the quality of the craftsmanship, which is striking, considering the $20 million budget. It is hard to imagine this level of craft being achieved in the U.S. for this money, and the difference is known only too well to Tschumi, who has built both here and abroad. In this particular instance, he designed the project in his New York office, but carried out design execution in his Paris office with his partner there, Véronique Descharrières. Ultimately, it is the craft—along with the form and the concept—that created this clarified, immaculate structure distinctively looming up from its suburban setting. So in sum, we would like to amend Tschumi's proposition: It is the concept revealed in form and realized by craft that distinguishes architecture from building. ■

Sources

Stainless-steel exterior wall and roof, metal/glass curtain wall, glazing, skylights: *Hevron*

Concrete structure: *Perret*

Acoustical ceilings and paneling: *Fournier Steiner*

Paints and stains: *Riedo + Fils*

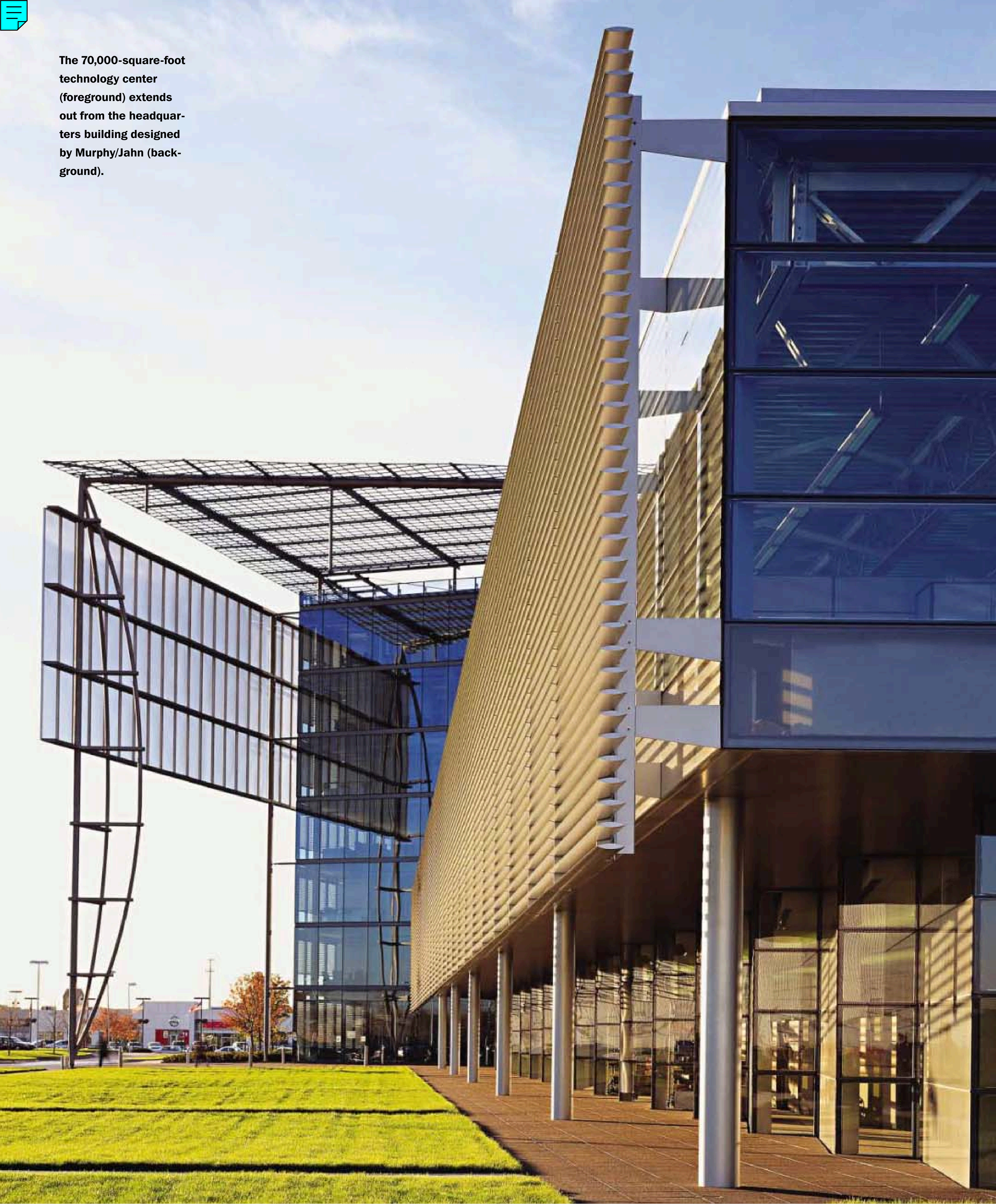
Lighting: *Badel + Cie*

Office furniture: *Saporetti*

For more information on this project, go to Projects at **www.architecturalrecord.com**.

PHOTOGRAPHY: COURTESY BERNARD TSCHUMI ARCHITECTS (THIS PAGE)

The 70,000-square-foot technology center (foreground) extends out from the headquarters building designed by Murphy/Jahn (background).



Krueck & Sexton designed the sleek new SHURE TECHNOLOGY CENTER to complement an existing building and define a corporate campus

By Cheryl Kent

Shure Technology got a bargain when it bought a spanking, brand-new, architecturally bold headquarters from HALO, the bankrupt company that commissioned it. Shure had just spent two frustrating years on fruitless negotiations for a site for its new headquarters elsewhere in suburban Chicago. Purchasing the existing building in Niles, Illinois, seemed to put the company exactly where it wanted to be: in a space that projected a strong image to the public and featured state-of-the-art systems (such as silent, polished steel-and-glass elevators with exposed mechanical systems) and the amenities to satisfy prized employees. It was a big step up for a company that had been housed in separate factorylike buildings for decades.

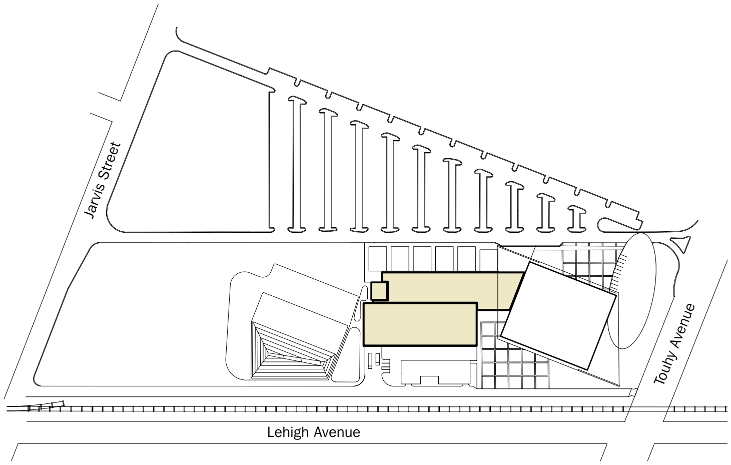
Then, the company's executives reconsidered their needs and realized they wanted more than even the new building could provide. So Shure, a privately held company that is a leader in the audio industry, considered certain functions it had never performed before. Product tests, which had been outsourced, might now be done in-house. A radio-frequency chamber for testing new wireless products and a sophisticated recording studio and sound room where artists could try new things with the company's equipment also showed up on the wish list. Soon it was clear the building would have to be enlarged.

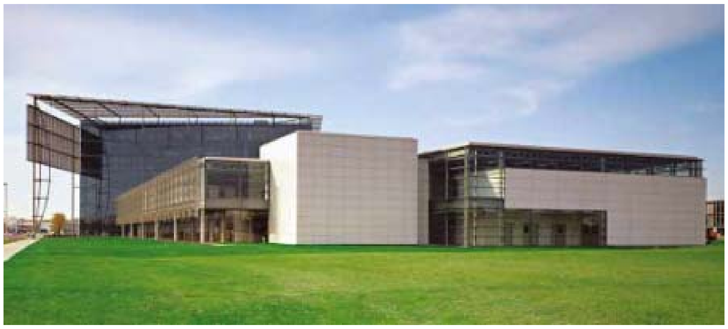
When it first contemplated a new building, Shure had talked with Chicago-based Krueck & Sexton Architects. Now the company brought the firm back to design the addition to the HALO facility. As the conversation between client and architects continued, the project grew from 25,000 to 70,000 square feet.

Shure wanted to respect the existing building, which had been designed by Murphy/Jahn, but insisted that it be connected to the new structure. Designing an independent building would have made compatibility between the two an easier problem to solve, but the purpose of the move was, in part, to consolidate the company's engineering and design departments with its corporate offices.

As architecture firms, both Krueck & Sexton and Murphy/Jahn have identifiable approaches to design and are quite different from one another. While Murphy/Jahn's designs are often single, arresting gestures conveyed in an instant, Krueck & Sexton's work tends to be subtle and nuanced, yielding more satisfaction the longer one looks. A bad painting or unworthy chair could disrupt a Krueck & Sexton interior; in a Murphy/Jahn project, a wrong move might have less impact, subsumed by its environment.

Krueck & Sexton's addition for Shure honors both sensibilities. As the starting point for its own design, the firm borrowed a recurring angle from the existing building, canting its steel-frame technology center off Murphy/Jahn's concrete-frame headquarters. Sliding the new building under a high glass canopy that is one of





Krueck & Sexton designed the technology center (foreground in photo) as a series of boxes sliding past each other and toward the headquarters.

Project: *Shure Technology Center, Niles, Illinois*

Architect: *Krueck & Sexton Architects—Ronald Krueck, FAIA, design principal; Mark Sexton, AIA, project principal; Thomas Jacobs, Assoc. AIA, project director; Antonio Caliz, project architect; Greg Schmidt, Jake Watkins, Ulrik Weinert, Parus Kiravanich, project team*

Interior designer: *Jeanne Hartnett & Associates*

Engineers: *Tylk Gustafson Reckers Wilson Andrews (structural); CCJM Engineers (mechanical); Cowhey Gudmundson Leder (civil)*

Consultants: *Daniel Weinbach & Partners (landscape); Schuler & Shook (lighting); Kirkegaard Associates (acoustical)*

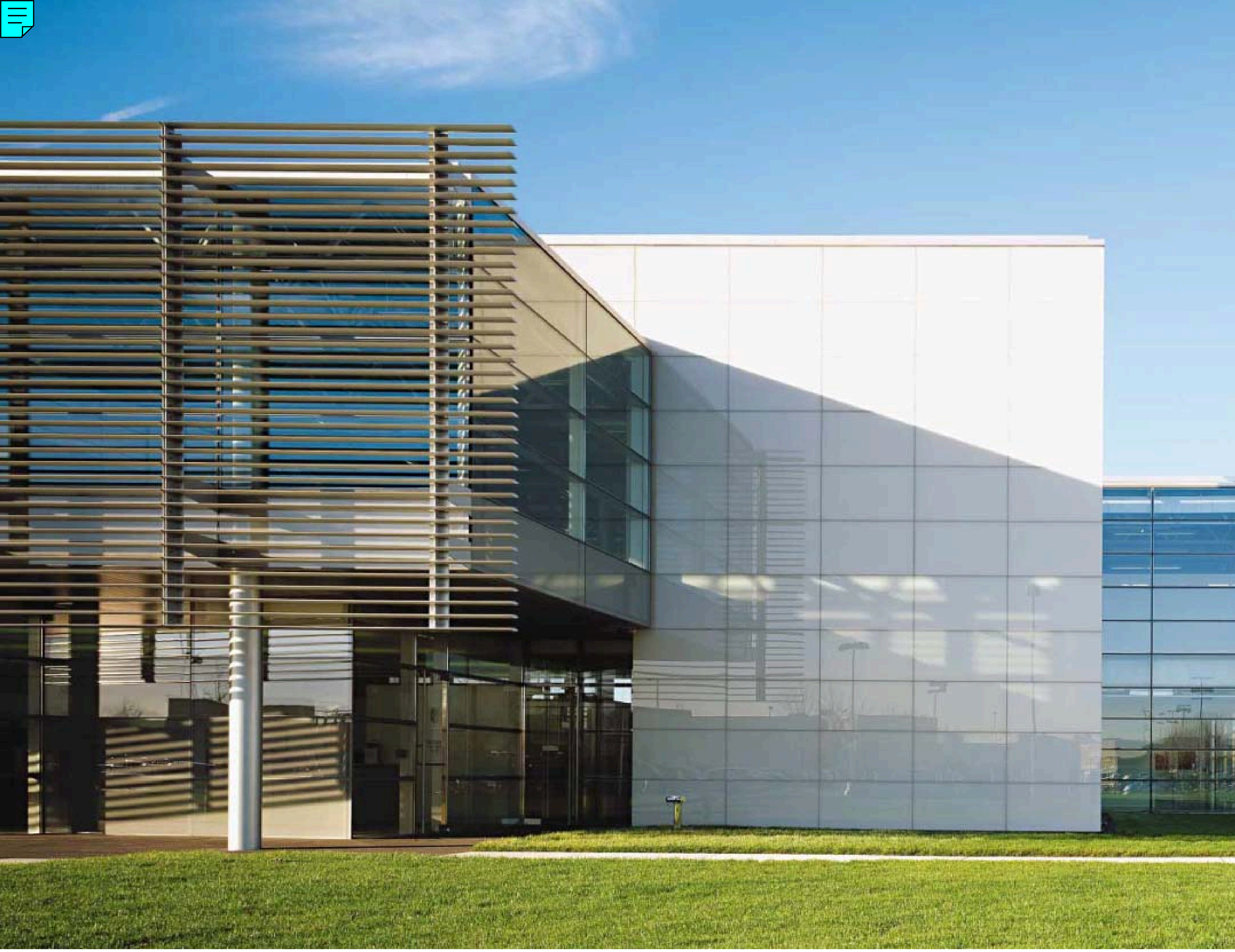
General contractor: *Harbour Contractors*

Cheryl Kent writes about architecture from Chicago and is the author of Santiago Calatrava: Milwaukee Art Museum, *to be published this month by Rizzoli.*

PHOTOGRAPHY: © STEVE HALL/HEDRICH BLESSING

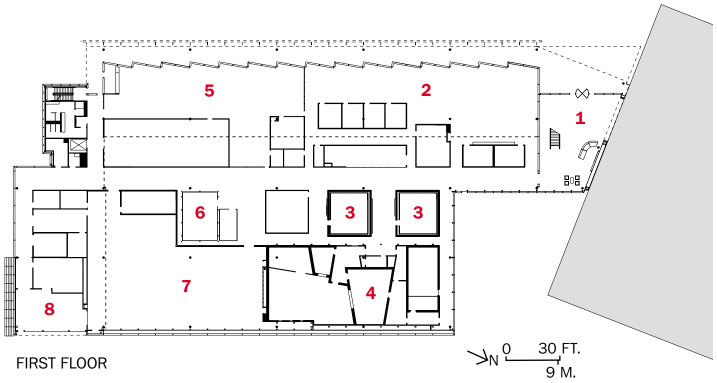
the most identifiable features of the Murphy/Jahn design, Krueck & Sexton created an addition that is both an insertion into a corporate complex and an extension of an existing hall. It is an ingenious solution that announces both separation and affinity between the two parts. This device has the added advantage of siting the new structure parallel to a long driveway, thereby establishing an orthogonal character for the project. From this point forward, the addition is driven by four-square geometry. The building becomes a unique entity with a character all its own.

This character is horizontal and dynamic with volumes and surfaces changing subtly but continuously on every side, bringing to mind the Rietveld-Schroeder House in Utrecht or a Mondrian rendered in three dimensions. In plan, the addition resembles two rectangular boxes with one sliding ahead of the other. One box contains the engineering-team areas and other offices, the other—a two-story space with 40-by-50-foot clear-span bays—holds specialized testing and performance facilities and a shop for building prototypes. The sliding-box motif is applied to section and elevations as well. For example, a white cube containing mechanicals pushes out from the east side of the building. Similarly, the entire second story is pulled forward from the base, creating a sheltered walkway below



1. *Lobby*
2. *Labs*
3. *Anechoic chamber*
4. *Listening center*
5. *Service department*
6. *RF chamber*
7. *Model shop*
8. *Loading dock*
9. *Engineers*
10. *Archival center*

Krueck & Sexton protected the east facade (above and opposite bottom) with a louvered screen, while clear, low-E glass allows views inside (opposite, top).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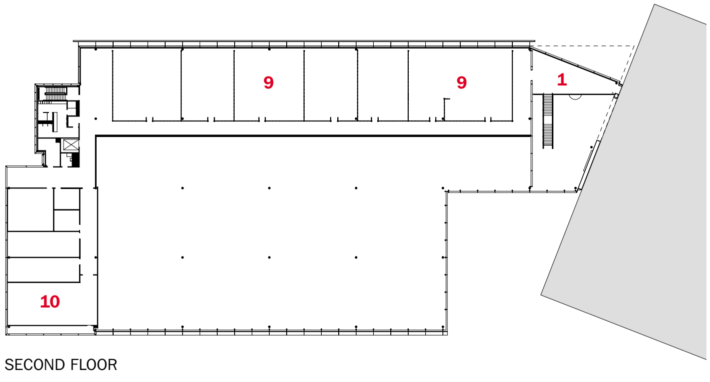
FIRST FLOOR


9
9
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10
SECOND FLOOR

Although the building's footprint is quite big, floor-to-ceiling glass curtain walls and interior partitions (above and opposite) bring plenty of daylight to common spaces. A generous corridor serves as an interior street (left), while a glazed bridge (far left) offers views from the second floor.

that runs the length of the facade.

Krueck & Sexton took the vertical fenestration module from the headquarters and turned it 90 degrees in the two-story addition, reinforcing the relationship between the two buildings as well as the horizontality of the new one. A fixed steel screen projects out from the upper floor, offering a degree of protection from the sun without obstructing views from the interior. The screen helps animate the facade, along with a sawtooth curtain wall.

The architects placed the lobby in the crook of the complex's elbow, that point where the addition joins the existing building, and filled this double-height space with daylight from glass walls on the east and west. Fritted glass at the upper story transforms the glazing into a translucent screen. A custom, punched-steel stair that also permits light to pass through it leads to second-story offices and a walkway connecting the old and new parts of the building. Throughout the addition, the architects used glass with a low iron content because of its exceptional clarity. In zones where opacity was appropriate—mechanicals and the testing zones, for example—the glass was back-painted so it reads as pure white.

Krueck & Sexton's role in fitting out the new office spaces was limited, and the quality of these interiors suffers as a result. But the building has great bones, with a two-story-high internal street running through the middle, bringing daylight and drama to the entire workplace.

Suburban sprawl surrounds the Shure complex with malls, fast-food joints, and a wide road feeding a nearby highway. In this environment, the Shure complex stands out as an oasis of good design and sensible planning. As urbane places often do, Shure combines two unlikely parts; Krueck & Sexton made them work together. ■

Sources

Metal-and-glass curtain wall: *Baker Metal Products; Architectural Wall Solutions (AWallS)*

Built-up roofing: *Garland*

Low-E, fritted glass: *Viracon*

Glass revolving door: *Crane*

Metal doors: *Ceco Door Products*

Acoustical ceilings: *USG (Halcyon ClimaPlus)*

Resilient flooring: *U.S. Flooring*

Carpet tiles: *Interface*

Ceramic-metal-halide lights: *Holophane*

Fluorescent pendant lights: *Lightolier*

For more information on this project, go to Projects at **www.architecturalrecord.com**.

Italy - the World Hub for Quality Stone and Craftsmanship

There are many works of art by Italians that are not found in Museums. Since the dawn of civilization, Italians have created and exported some of their most lasting works of art in Natural Stone: statues, floors, balustrades, columns, countertops stairs, facades and other architectural elements that are found in buildings around the world. The craftsmanship of Italian stone industry workers has been well respected around the world for centuries.

This skill and dedication are one of the reasons that Italy is the hub of the international block trading industry. Italian stone materials are world-renowned for their beautiful, wide range of colors and sizes and the country has long been one of the world's leading producers of raw materials. More than 10.5 million tons of block per year are quarried and processed at close to 10,000 companies in Italy by 60,000 of the world's most highly skilled craftsmen.

But it's not only Italian marble. Blocks from every stone producing country in the world are shipped to Italy to be sawn, fabricated, and finished for projects around the world. More than 2.3 million tons of raw materials with a value of nearly 500 million USD are brought into Italy each year for processing. Another 3.5 million tons of product, most of which is finished, is exported at a value of more than 2 billion USD.

An architect looking for the largest selection of commercially available stone on the international market can find it only in Italy. Its two main production centers, Carrara and Verona, have the world's largest selection of blocks and slabs from all over the world -- waiting for that creative touch of Italian craftsmen.

Much of this stone goes to the United States. Italy supplies close to two times more stone to the United States than any other foreign supplier, but only about one third of that is extracted from quarries in Italy. The rest comes from other countries in block form and is processed into slabs, tiles or custom forms by Italian craftsmen.

This talent and experience are sought after for many projects, especially in the United States. Colorado's Denver International Airport is one of those. Like many states, Colorado requires a certain percentage of local materials for all public buildings, and this project called for white Colorado Yule marble. Because of their skill and efficiency in large commercial projects, Italian stone craftsmen were brought to Colorado to oversee quarrying of the blocks, which were sent to Italy to be processed and finished before being returned to Denver for installation.

Architects of the Getty Center in Los Angeles also sought the expertise of Italy's stone craftsmen to develop special splitting machinery for the more than 1,000 containers of travertine quarried in Italy and used on this gorgeous building.

These are not isolated projects. Companies in the Italian stone industry are continually involved in quarrying and final installations for thousands of commercial projects in all parts of the world. Why? Because Italy is one of the few countries with a stone industry that has the winning combination of a large pool of labor experienced in hand work and CNC machinery; the largest concentration of commercially available stones and blocks for cut-to-size projects; and one of the highest concentrations of stone machinery manufactures in any single country. Italy also hosts two of the industry's most important annual international events, the Carraramarmotec in Carrara, Italy (June 1-4, 2005) and the Marmomacc in Verona (Sept. 29 - Oct. 2, 2005).

To learn more about the exciting Italian stone industry and to obtain a complimentary copy of the MARMORA, a full-color plate book of approximately 80 stones quarried in Italy, contact the Italian Trade Commission in Los Angeles at
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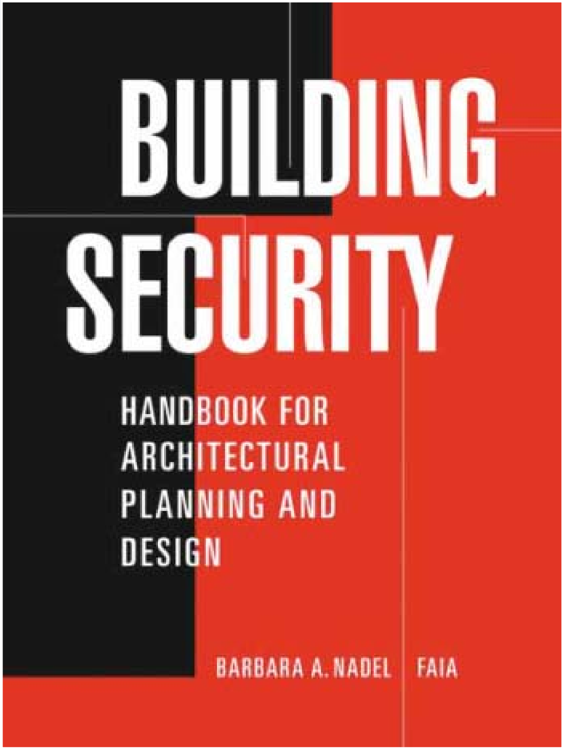
Barbara A. Nadel, FAIA



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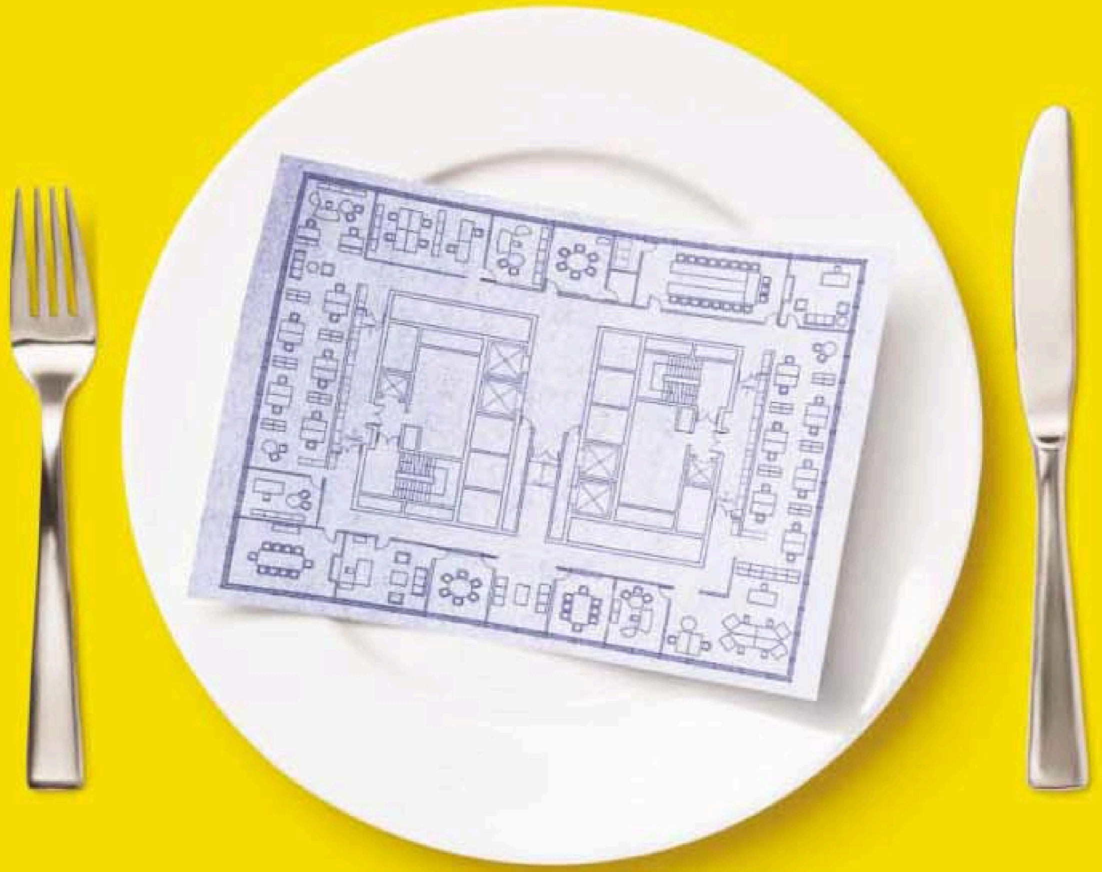

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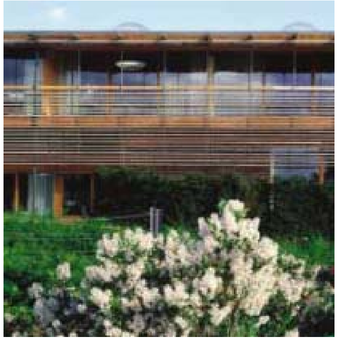
Health Care

Healing Architecture

FOCUSING ON CLINICS: HOW CAN HEALTH-CARE-FACILITY DESIGN IMPROVE MEDICAL OUTCOMES AND GENERAL WELL-BEING?

By Sarah Amelar

BUILDING TYPES STUDY 846



1.

Basel, Switzerland

Herzog & de Meuron's rehabilitation center swathes therapeutic courtyards and gardens in fine veils of oak.

2.

Apple Valley, Minnesota

ALTUS Architecture + Design plants a nurturing dental clinic in a field of prairie grass, creating a serene setting, along with ecologically resourceful climate-control systems.

3.

Boston

Cambridge Seven and Michael Fieldman bring order and sunlight into a large urban medical complex—which, like so many others, had grown by piecemeal accretion.

Even when we're well, radiant, sunlit interiors with garden or landscape views tend to make us feel better than hermetic, coldly institutional places. It's hardly a lofty concept. And the logic goes, if the surroundings enhance our mind-set, increasing relaxation and reducing stress, then our physical condition—our health and healing processes—will benefit. This thinking rests firmly on twin principles of intuition and experience.

But in the 1980s, behavioral scientist Roger S. Ulrich put this empirical concept under the lens of scientific scrutiny. In a landmark study, he found that surgical patients overlooking a verdant landscape required shorter hospital stays, fewer narcotics, and less nursing care than patients, just across the hall, with brick-wall views. Despite variables in every illness and individual, researchers have rigorously built on this study.

Motivated not merely by a desire for patient well-being, but often by heated competition for patients and top physicians, the emphasis on health-care aesthetics has grown in recent years. Hotel-like birthing rooms, for instance, have become ubiquitous. But are ever-more stylish venues really improving health care?

"Sure, the settings tend to be prettier today—with bigger design budgets—but how much is just skin deep, cosmetic, and formulaic? Are the environments impacting people's lives or health?" asks Wayne Ruga, AIA, founder of the Center for Health Design and the Caritas Project, organizations focused on such questions.

Ruga holds up as a model Planetree, a nonprofit working with health centers to develop holistic environments attuned to patient dignity, privacy, perspective, and sense of control. When "tourists" at Planetree hospitals "think they can just copy the carpeting to get similar results, they're missing the larger picture," he says. "The approach goes much deeper, to an organizational culture centered on the patient." Philosophically and physically the patient becomes the focal point, informing the spatial configuration and design of a quasi-domestic setting that evolves over time.

Aware that each specialized area of medicine brings its own needs, we are presenting three contrasting clinics—all of which shed sunlight on patients. At REHAB, in Switzerland, architects Herzog & de Meuron integrated courtyards into a visually light, noninstitutional, wood-screened structure designed to inspire independent mobility among spinal-cord- and brain-injured patients. For the Dalseth Dental Clinic, in a Minneapolis suburb, ALTUS planted a glassy building amid prairie grasses over a geothermal climate-control system, providing tranquility, as well as ecological benefits. And at the Yawkey Center for Outpatient Care, in Boston, Cambridge Seven and Michael Fieldman devised a master plan that allows sunshine into a new structure on a tight, densely urban site within a larger medical complex.

Hard as it is to quantify the impact of these designs on health and healing, one experience is telling. When visiting REHAB, this writer took a trolley up a hill to the end of the line. En route, several people in wheelchairs boarded, heading for the same destination. But well before the final stop, some disembarked. In spite of brutally hot weather, they sped up the hill, beating the trolley. Apparently the place and its therapeutic program had motivated them. That uphill race speaks for itself. ■

For more information on these projects, go to Projects at www.architecturalrecord.com.

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REHAB, Center for Spinal Cord and Brain Injuries

Basel, Switzerland

1

HERZOG & DE MEURON DEMATERIALIZE THE WALL PLANE AND BRING NATURE INDOORS TO DEINSTITUTIONALIZE A CLINIC.

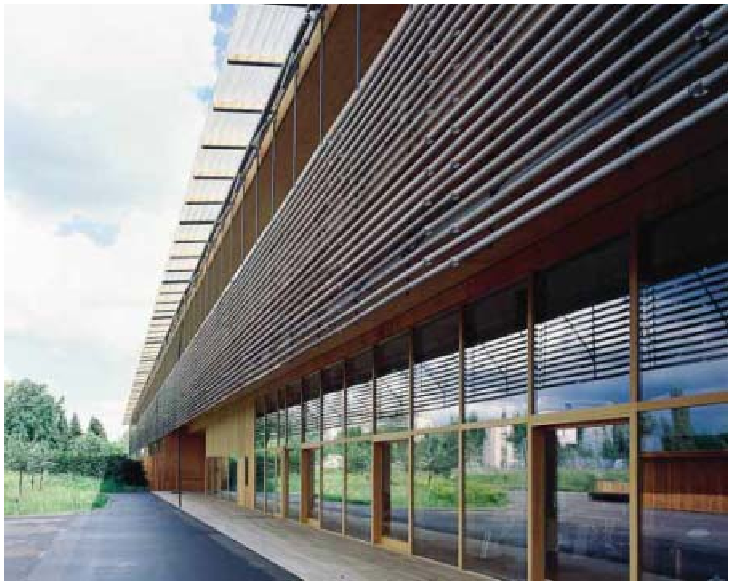
By Suzanne Stephens

Architect: *Herzog & de Meuron—Arndt Becker, Christine Binswanger, Nandita Boger, Lukas Bögli, Eric Diserens, Raphel Forny, Michael Frei, Mathias Frey, Diana Garay, Stefan Hauswirth, Jacques Herzog, Detlef Horisberger, Jürgen Johner, Andreas Künzi, Lukas Kupfer, Niels Lofteroed, Orna Marton, Sacha Marchal, Mario Meier, Pierre de Meuron, Christine Moser, Camilo Rebelo, Stephan Rüegg, Philippe Schaerer, Ivo Sollberger, Peter Taylor, Camillo Zanardini, project team*
Client: *REHAB Basel*
Associate architects: *Proplaning*
Construction manager: *Hardegger Planung & Projektmanagement*
Consultants: *Ingenieurgemeinschaft ARGE Pauli Frei Zachmann (structural); Sulzer Energieconsulting (energy); Amstein & Walthert (electrical); Bogenschütz (sanitary); August Künzel (landscape); Martin Lienhard (acoustical)*

Size: *246,386 square feet*
Cost: *$110 million*
Completion date: *March 2002*

Sources
Cloth sunshades: *Sunlux 6011*
Door controls: *GEZE Products*

For more information on this project, go to Projects at ***www.architecturalrecord.com***.



You expect clinics to look, well, clinical—Modernist, austerely immaculate boxes, hygienically white inside and out. REHAB Basel, a privately run clinic for spinal-cord and brain injuries, ingeniously subverts the stereotype while bolstering its therapeutic goals. It appears residential and natural—though not with a funky, down-home earthiness, but a crisply turned-out mien. Here, oak, pine, larch, and ironwood enclose and screen exterior walls, and a rectilinear plan brings daylight and landscape into its precincts through courtyards, grassy roofs, glazed walls, upper-level decks, and skylights.

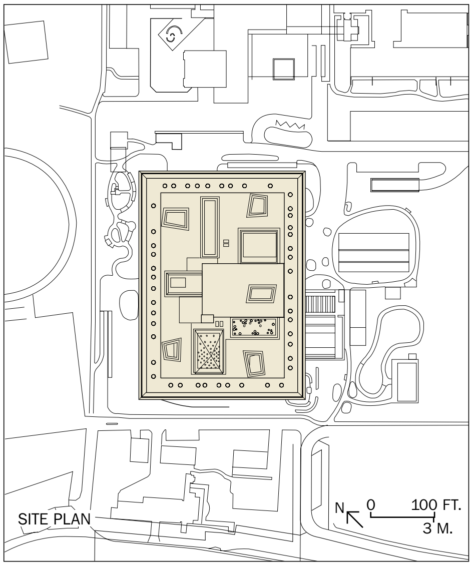
Program

In providing 92 beds in double and single rooms, where patients with spinal-cord or brain injuries can stay up to 18 months, the clinic directors eschewed the institutional hospital look. Gone is the typical maze of corridors and doors to anonymous rooms. The staff sought to connect patients visually and physically with the landscape while giving wheelchair-bound paraplegics a sense of autonomy. The program called for a day clinic, physical and neurological therapy rooms, medical facilities, conference rooms, a gym, a patient swimming pool, plus overnight accommodations and semiprivate meeting areas for family members.

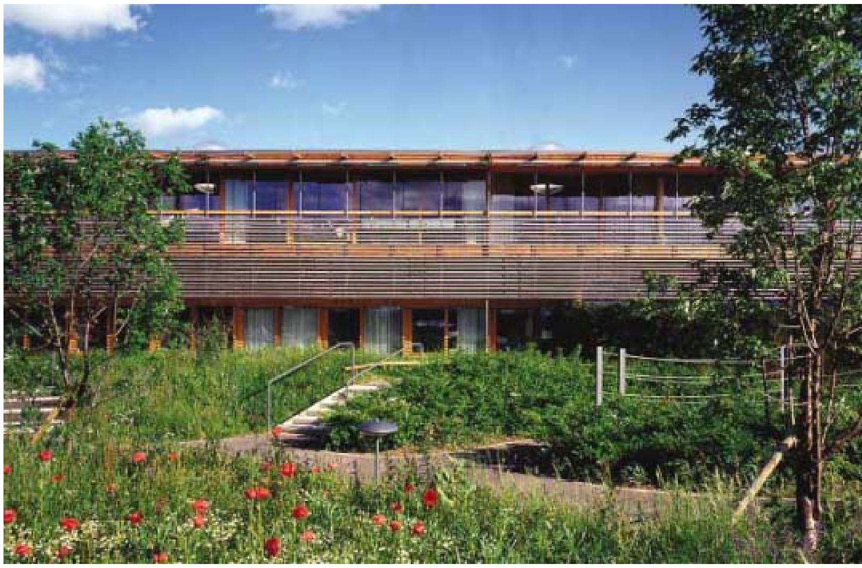
Solution

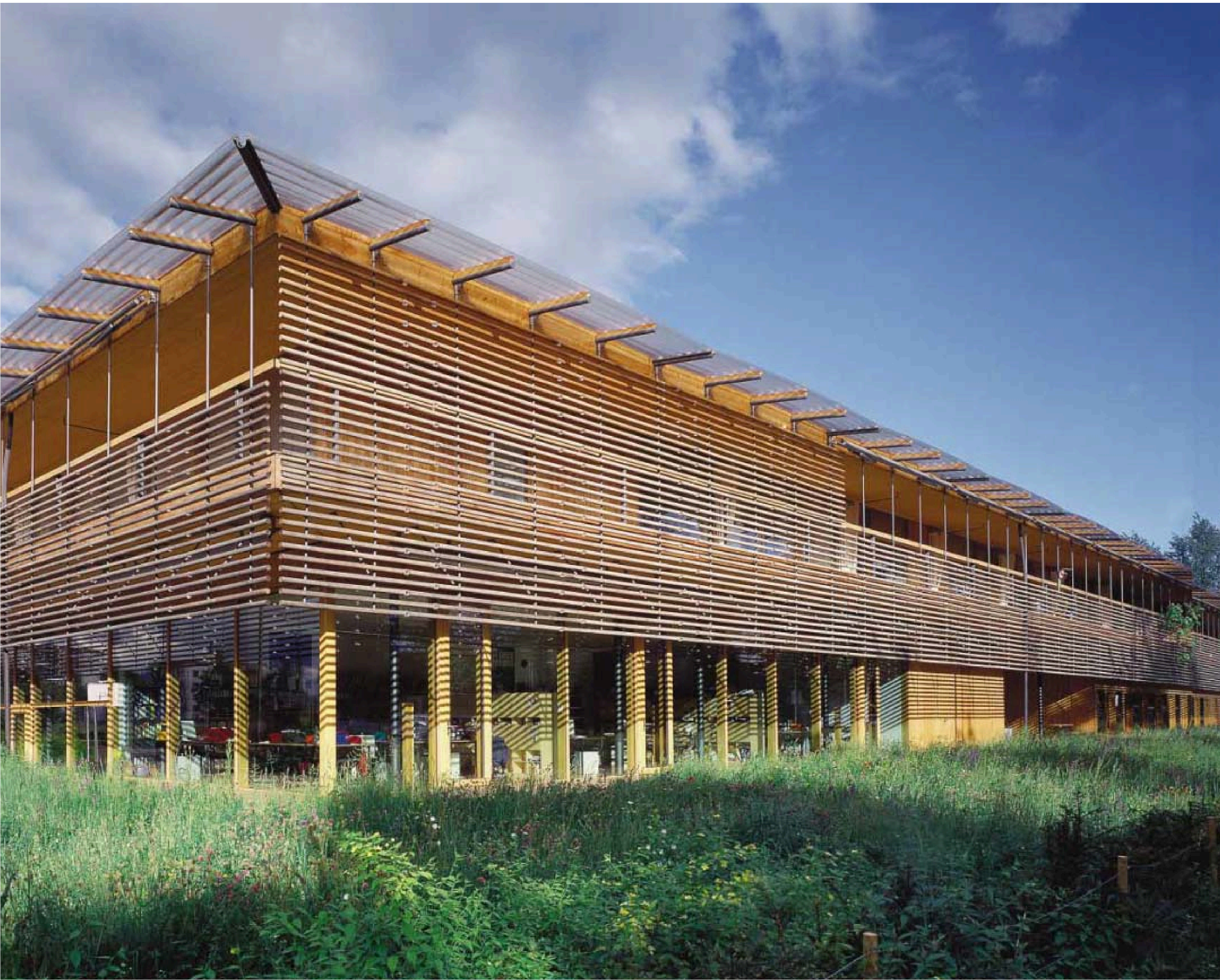
Abstractly evoking the plan of a village, with streets, plazas, and houses, Herzog & de Meuron created a build-

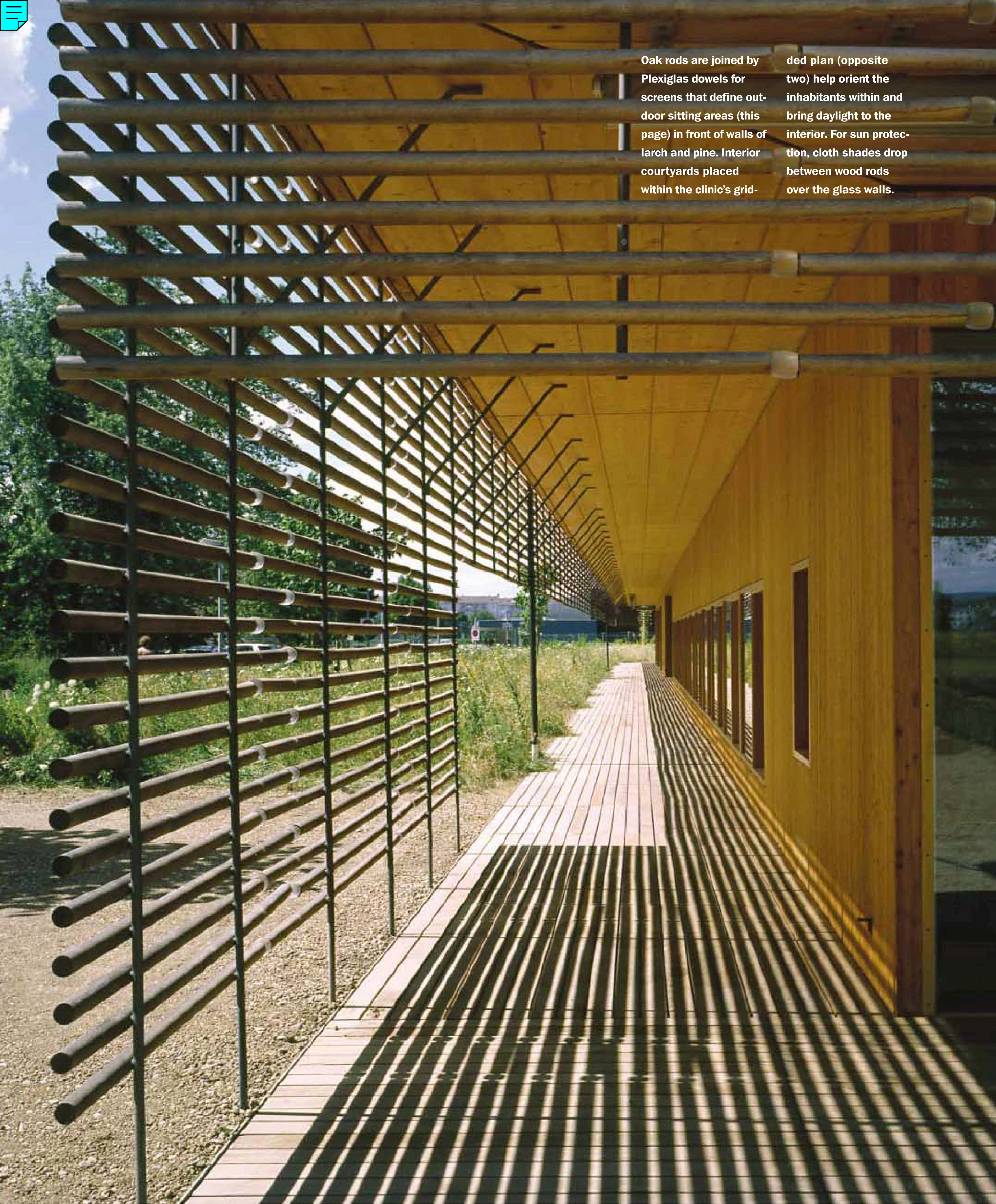
PHOTOGRAPHY: © MARGHERITA SPILUTTINI, EXCEPT AS NOTED



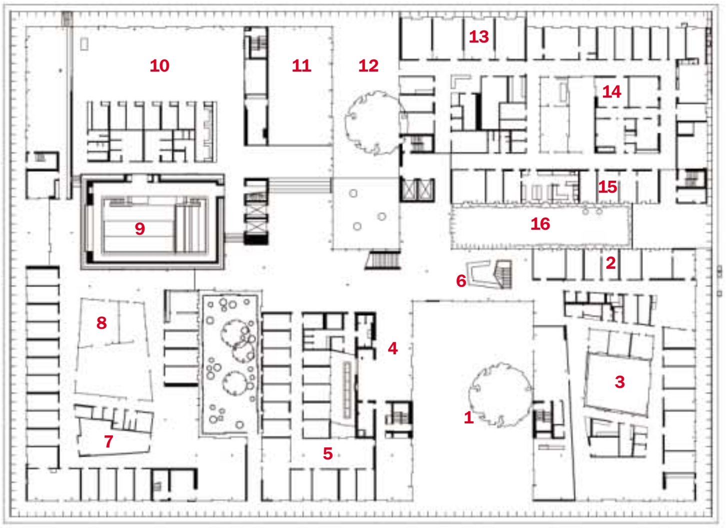
At the clinic, grass grows on the roof, wood screens wrap the exterior, and wood decks with overhangs open off the second-floor bedrooms (below). Other noninstitutional touches include landscaped interior courtyards and easily accessible outdoor spaces and gardens (opposite and right). A 262-foot-long wheelchair training course (plan, left) loops around the 6-acre site.



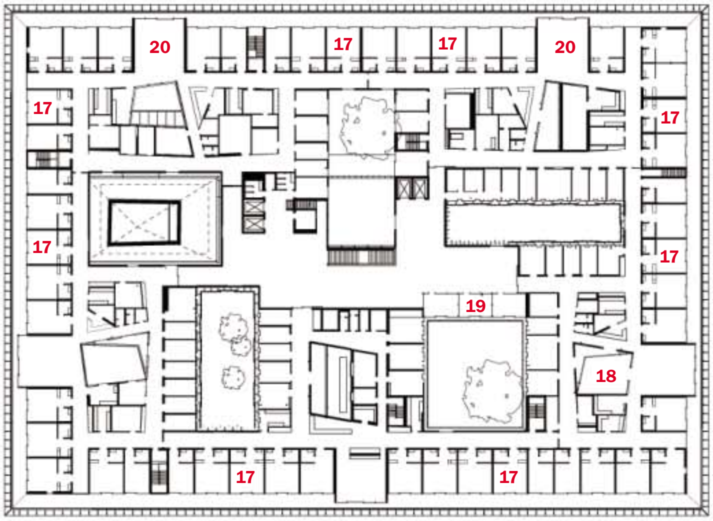




Oak rods are joined by Plexiglas dowels for screens that define outdoor sitting areas (this page) in front of walls of larch and pine. Interior courtyards placed within the clinic's gridded plan (opposite two) help orient the inhabitants within and bring daylight to the interior. For sun protection, cloth shades drop between wood rods over the glass walls.



FIRST FLOOR



SECOND FLOOR

1. *Entrance court*
2. *Outpatient rooms*
3. *Day hospital*
4. *Cafeteria*
5. *Administrative offices*
6. *Reception*
7. *Neuropsychology*
8. *Occupational and speech therapy*
9. *Therapy pool*
10. *Physiotherapy*
11. *Multipurpose space*
12. *French garden*
13. *Intensive care*
14. *Medical services*
15. *Diagnostics*
16. *Courtyard with pool*
17. *Patients' bedrooms*
18. *Services*
19. *Offices*
20. *Lounge/dining*

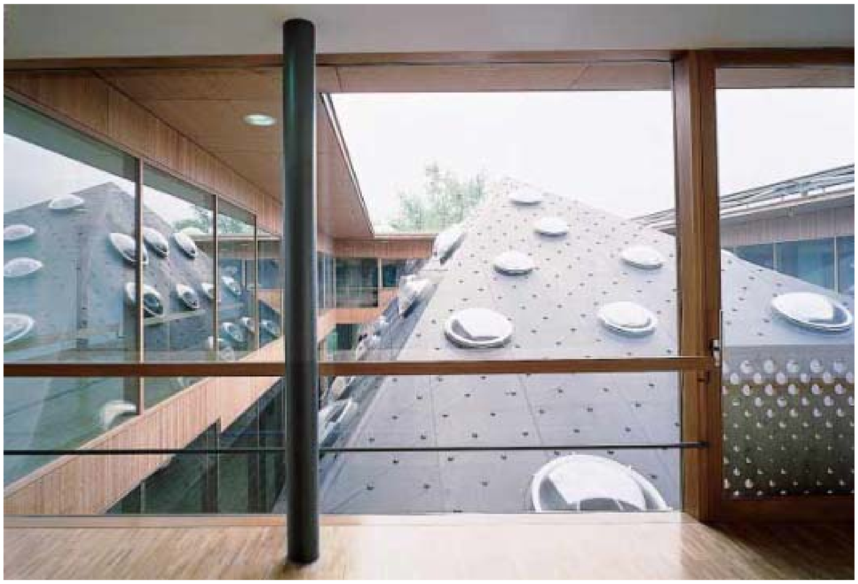
ing that integrates five courtyards into a three-story structure. The architects felt that a low-rise horizontal organization with large floor plates, totaling 246,386 square feet, rather than a tower configuration, would promote independent movement by wheelchair. (Elevators take patients from floor to floor.) On the two major levels, rooms for specific functions fill sections of the grid, forming volumes like superblocks—in some cases, cranked slightly within the orthogonal framework.

The most striking feature of the building becomes evident in approaching the clinic. Herzog & de Meuron swathed the structure—a concrete deck with steel columns—in a fine screen of slender oak rods over glass and larch and pine-paneled exterior walls. The wooden veil, with Plexiglas dowels that glisten in the light among the horizontal and vertical rods, adds texture to the entire complex. These brise-soleils not only filter the light (supplemented by off-white cloth shades), but afford a degree of visual privacy, as well. As Christine Binswanger, the project architect, observes of the gray and tan wood rods, "Wood weathers—it is not meant to look so perfect."

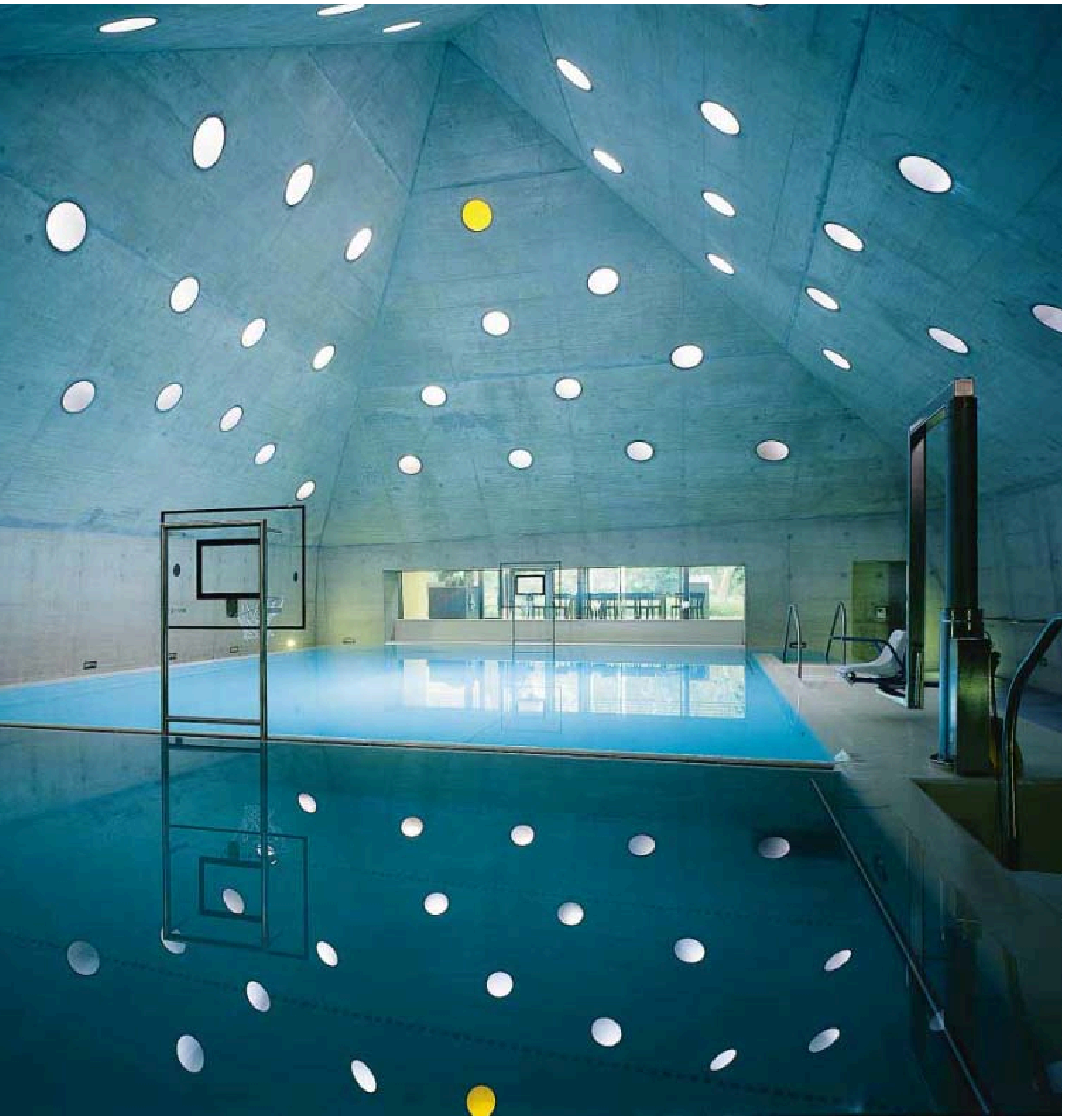
Since one arrives here through an open courtyard edging REHAB's café, the clinic's actual identity only becomes clear on seeing the reception desk at its center. Courtyards, given distinct identities through planting or water features, also orient visitors and patients: Each court signifies a different locus of therapeutic activity.

To ensure patient privacy, the architects placed bedrooms along the second floor's layered perimeter, where sliding glass doors open onto expansive wood decks wrapping the building. The decks, sheltered by wood roofs, offer panoramic views to the surrounding residential area (providing a sense of floating detachment from the surroundings that recalls the experience of Hans Castorp on his sanatorium balcony in Thomas Mann's *The Magic Mountain*.) Transparent plastic spheres, 7 feet in diameter, embedded in the bedroom ceilings bring in sunlight from above, making artificial illumination hardly necessary during the day. Herzog & de Meuron

PHOTOGRAPHY: © RUEDI WALTI (OPPOSITE)



Like an inert creature from the deep, the roof of the pool for therapeutic swimming looms up inside one of the courtyards. The concrete pyramidal form is covered in black rubber with round skylights to allow a haunting light to permeate the interior.



added bedrooms and conversation areas on a third level, where visitors can spend the night and meet with patients while overlooking the grass that covers the rest of the rooftop.

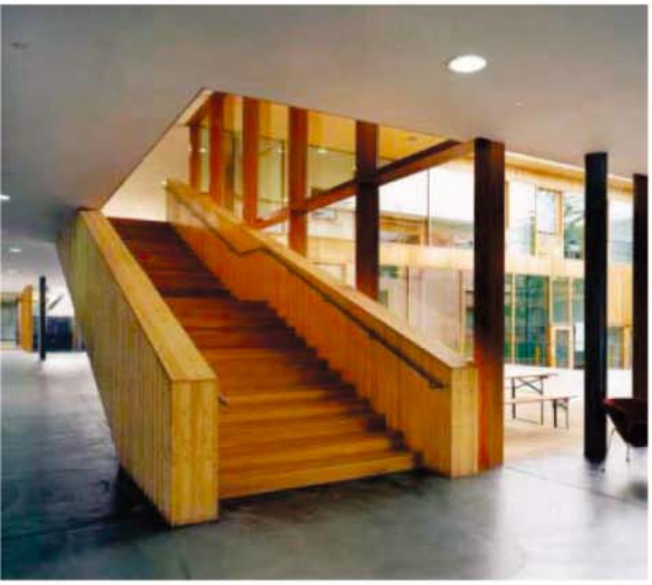
In one of the courtyards in this calm, serene setting, an irregular pyramid of concrete punctured with round skylights comes as a bit of a surprise. The mysterious angular hulk, shrouded in a black rubber, contains a dimly luminous swimming pool—a dramatic antidote to the rest of the center's abundant daylight.

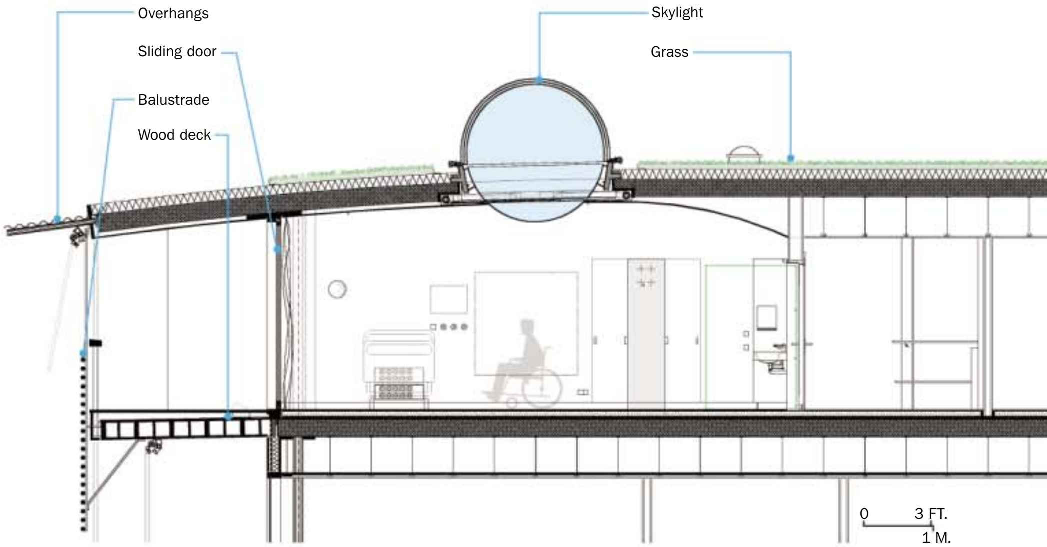
Commentary

The clinic's orthogonal plan and the street/house/plaza motif bring to mind the master plan for the Free University of Berlin (1963–79) by Candilis, Josic, Woods, and Schiedhelm, where a grid was employed to encourage ad hoc development. While REHAB differs drastically from the Free University in its size and emphasis on orientation within the flow of spaces, both grids promote a sense of order that allows for variety within them.

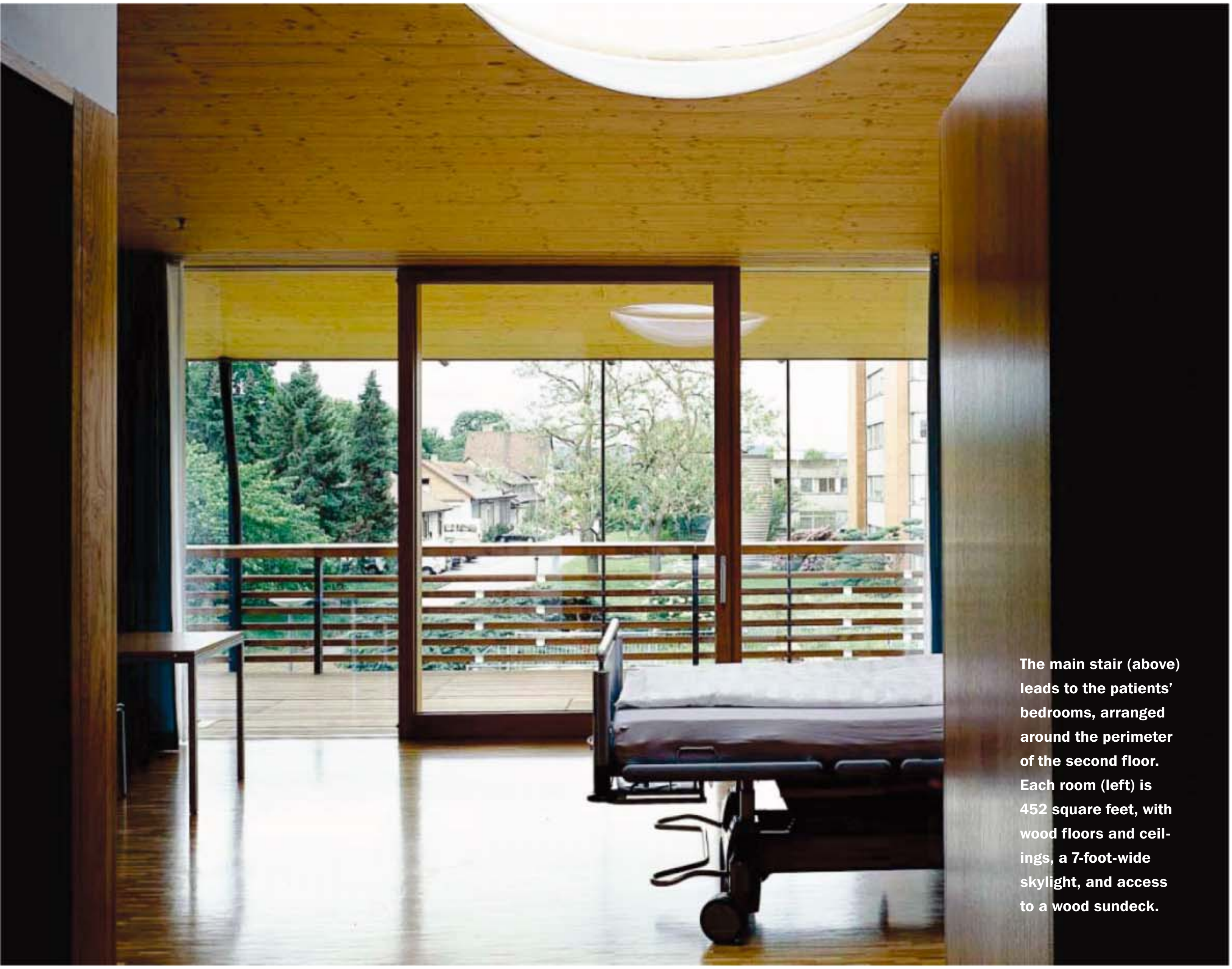
At the clinic, the outstanding feature remains the layered exterior screen of wood that softens the basic rectilinear form while relating it to the scale and materials of the surrounding residential neighborhood.

Scholars discussing Herzog & de Meuron's work frequently invoke the ideas of Gottfried Semper, the 19th-century architect and theorist, as does Carrie Asman so lucidly in an essay in *Herzog & de Meuron: Natural History* (2002). Semper had famously given textile wall coverings prominence as one of the four elements of architecture. To him the *wand*, or screen, rather than the *mauer*, or massive wall, was key to defining and enclosing space. Here at REHAB, Semper's notion manifests itself dramatically with this wooden weave of horizontal and vertical rods. And where the dematerialization of the wall plane helps deinstitutionalize the clinic, courtyards and decks bring nature literally indoors. The design for the clinic, now in operation for several years, appears quite successful. Let's hope it will be emulated as successfully elsewhere. ■




Overhangs
Sliding door
Balustrade
Wood deck
Skylight
Grass
0
3 FT.
1 M.

SECTION–PATIENT'S ROOM



The main stair (above) leads to the patients' bedrooms, arranged around the perimeter of the second floor. Each room (left) is 452 square feet, with wood floors and ceilings, a 7-foot-wide skylight, and access to a wood sundeck.

Dalseth Family Dental Clinic

Apple Valley, Minnesota

2

ALTUS ARCHITECTURE + DESIGN REINVENTS THE SUBURBAN DENTAL OFFICE, INTEGRATING A LUMINOUS INTERIOR WITH A FIELD OF PRAIRIE GRASS.

By Bette Hammel

Architect: *ALTUS Architecture + Design—Timothy Alt, AIA, principal; Chad Healy, project designer; Roger Cummelin, AIA, project architect; Tammy Anagaran, AIA, architect; Carl Olson, intern architect*
Clients: *Drs. Stephen and Pascal Dalseth*
Consultants: *Stroh Engineering (structural); Marcus Dental Supply (dental equipment)*
General contractor: *Karkela Construction*

Size: *7,000 square foot*
Cost: *$155 per square foot*
Completion date: *June 2002*

Sources
Face brick: *Endicott Clay Products*
Fiber cement panels: *Hardi Panel*
Stucco: *Stephen Donnelly*
Roofing: *Berridge (steel standing seam); GAF Materials (asphalt shingles)*
Locksets: *Schlage*
Carpet: *Bentley Mills*

For more information on this project, go to Projects at **www.architecturalrecord.com**.

The announcement that "we're going to the dentist today" arouses dread in most families. No wonder. While awaiting the potential screech of the drill, nervous patients are typically sequestered in banal, glaring, or dimly lit waiting rooms amid the constant buzz of dental equipment.

Dr. Stephen Dalseth set out to change all that. His dental practice had been thriving for 30 years in Apple Valley, a Minneapolis suburb. But when his son joined the three-dentist group, he seized the chance to rethink the standard approach.

"Our space didn't reflect our practice's progressive nature and sensitivity to patients," he told architect Tim Alt, AIA, principal of the Minneapolis firm ALTUS Architecture + Design. The Dalseths envisioned a dynamic, joyful, and comfortable place, where kids and adults would want to come. Stephen Dalseth also requested a green environment—literally and figuratively—with naturally luminous interiors. As he puts it, "Sunlight always energizes people."

Program

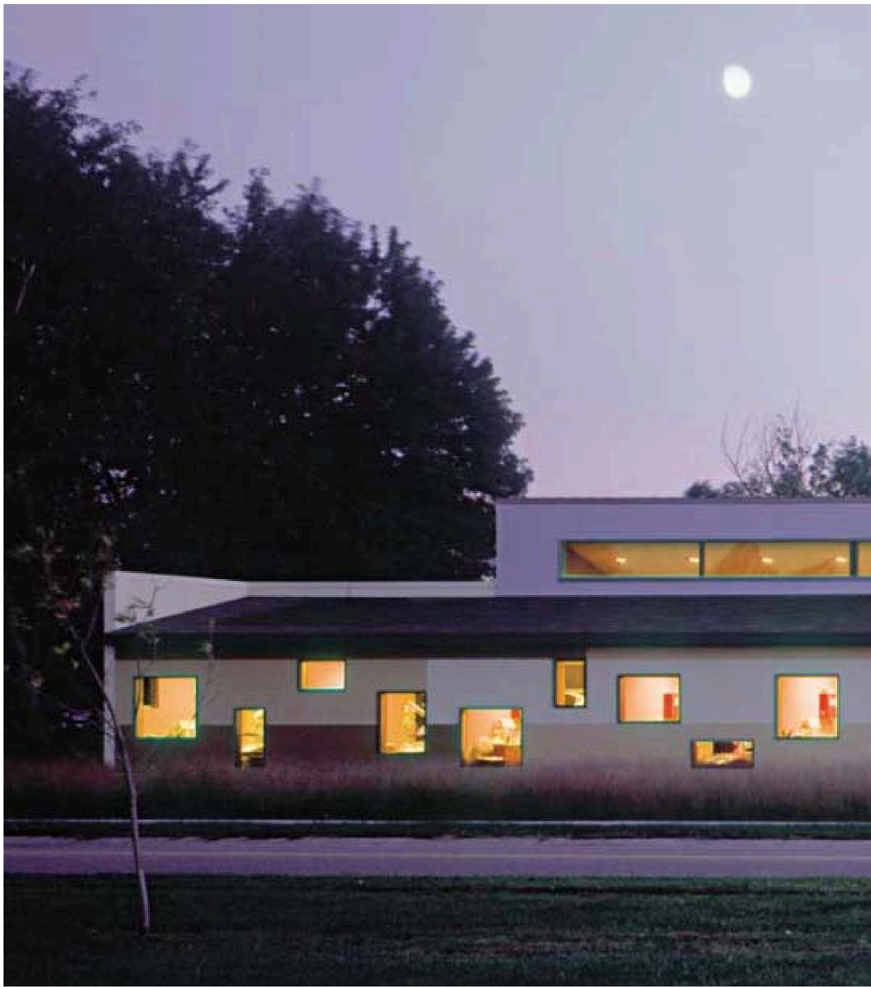
Building on that premise, ALTUS exceeded client expectations by designing a colorful, 7,000-square-foot structure with a glazed waiting room at one end, set in a field of prairie grass. The site and its mature existing trees contrast with the clinic's previous quarters in a bland downtown office building.

ALTUS's 152-foot-long rectangular facility accommodates a program for 12 examination rooms, one dental lab, two X-ray-developing rooms, group offices for staff and the three dentists, a lounge, plus one space each for consultation and patient records. The architects used contrasting colors, forms, lighting, window proportions and placement, and applications of sustainable, low-maintenance materials to distinguish among various functions. Devising the entry was key. "From the beginning," recalls Alt, "we wanted the entrance to be a beacon, a welcoming passageway to a reinvented dental clinic."

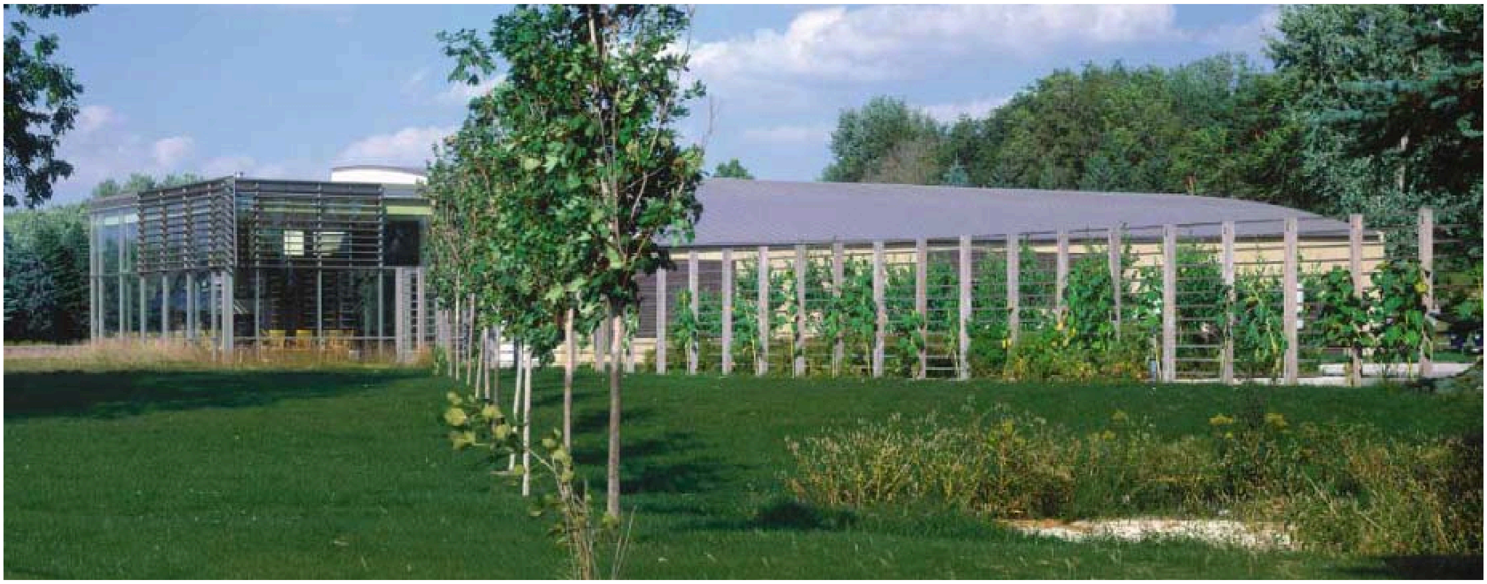
Solution

The arrival sequence integrates the building with a seemingly wild land-

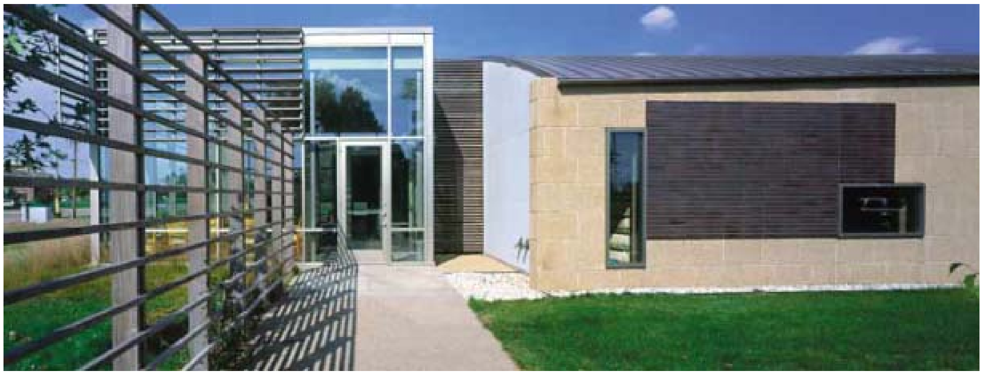
Bette Hammel is an architectural journalist based in Wayzata, Minnesota.

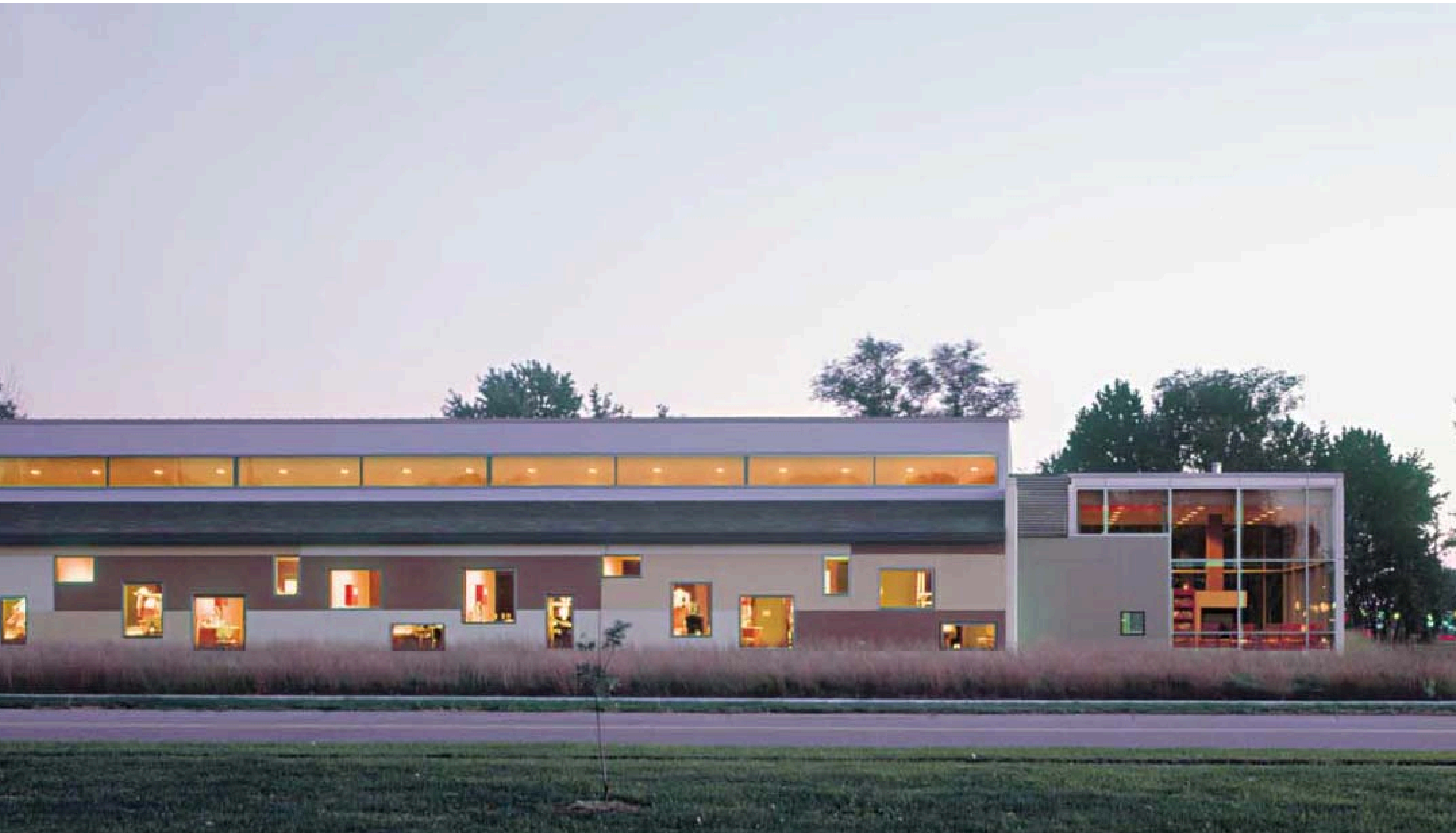


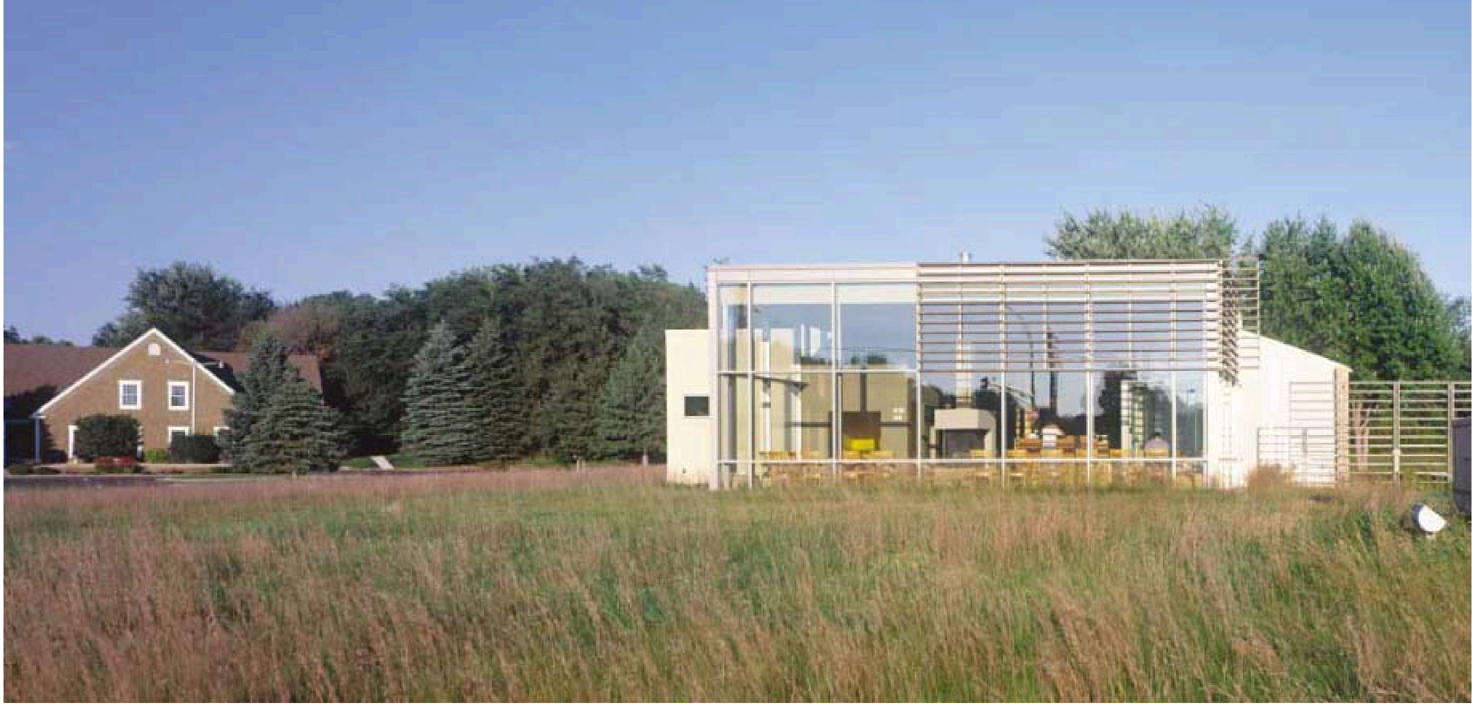
PHOTOGRAPHY: © PETER BASTIANELLI-KERZE



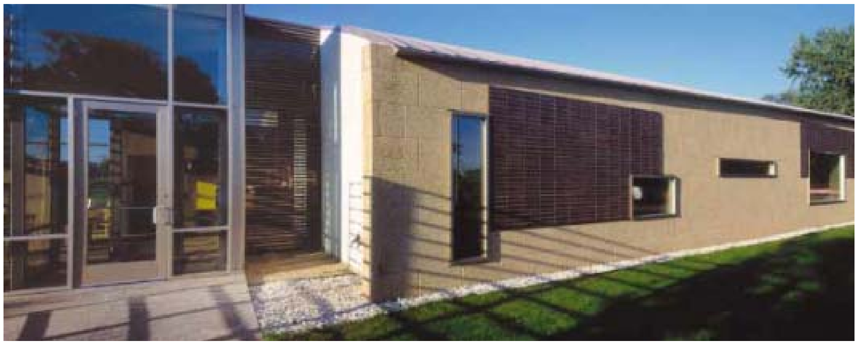
A slatted screen of ipe wood borders the path that leads from the parking area to the building's entrance (top and right). Here, a glassy volume at the end of the building contains the waiting room. The ipe screen serves as a freestanding trellis or fence, but becomes a brise-soleil where it wraps the glazed structure. On the building's north face (below), the rhythm of rectangular windows, beneath a clerestory strip, reveals the examination rooms.







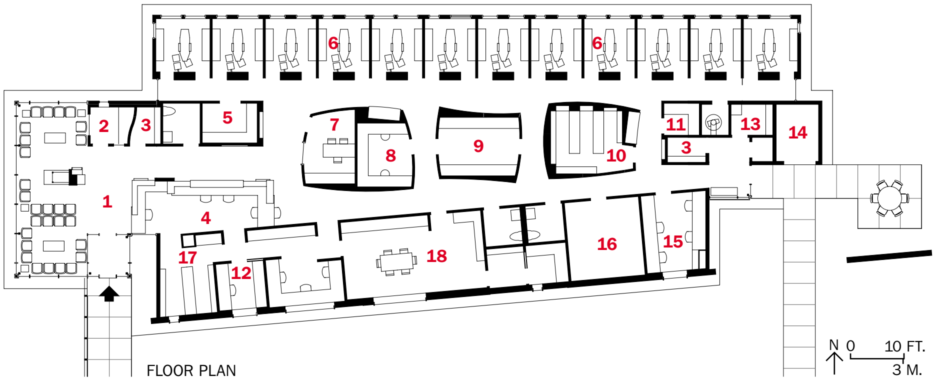
Filled with sunlight, the glassy waiting room (top and opposite, top) rises from a field of prairie grass. The south elevation (right), which faces the parking area, combines brick panels with concrete masonry block.



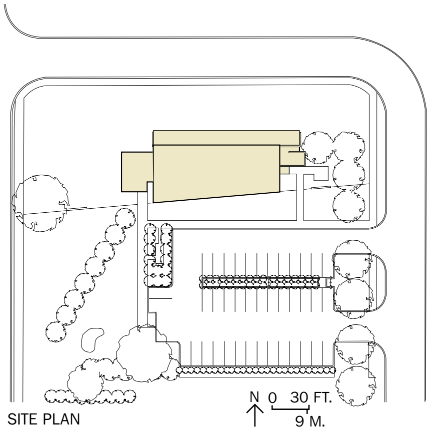
scape. Working with Minneapolis landscape architects Coen + Partners, the design team transformed a 2-acre clearing at a busy intersection by planting prairie grass across the site's northern half. A trail of pavers extends from the parking area to entry, animating movement around the structure. Edged by a tall screen of slatted ipe wood, the path leads visitors into the glazed waiting room, a glass box at the end of the larger rectangular volume. The freestanding screening element serves as a trellis, but becomes a brise-soleil where it partially wraps the glazing.

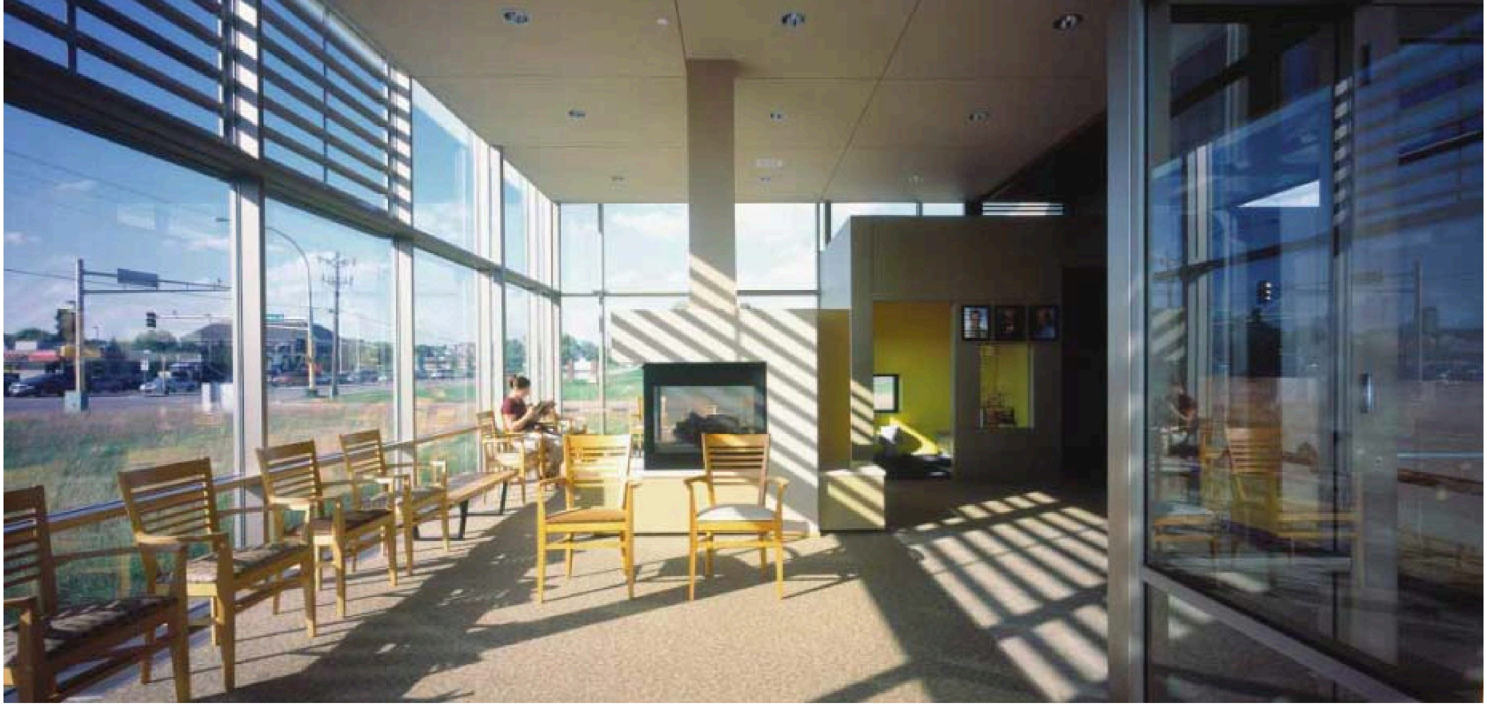
Beyond the entry, a row of examination rooms face even, low-glare northern light—best suited to visual tasks. A band of clerestory windows also draws north light into the clinic's depths. Over the central space, a gently convex ceiling directs rays onto three colorful sculptural forms beneath it: a consulting room sheathed in deep red; a sterilization lab with a yellow exterior; and a supply room within a gray-green shell. Objectlike, these volumes stop short of the ceiling. A maple and cherry reception desk adjoins the glass-enclosed waiting area, where a yellow playroom eases children's anxieties.

Expressing interior functions on the exterior, the building's north face presents a lively rhythm of examining-room windows, punctuating a collage of yellow, cream, and burnt-red stuccoed panels. On the opposite facade,



1. *Waiting*
2. *Playroom*
3. *Coats*
4. *Reception*
5. *X-ray developing*
6. *Exam room*
7. *Consultation*
8. *Laboratory*
9. *Sterilization*
10. *Storage*
11. *Darkroom*
12. *Staff office*
13. *Janitor*
14. *Waste*
15. *Dentists' office*
16. *Mechanical*
17. *Charts*
18. *Staff lounge*





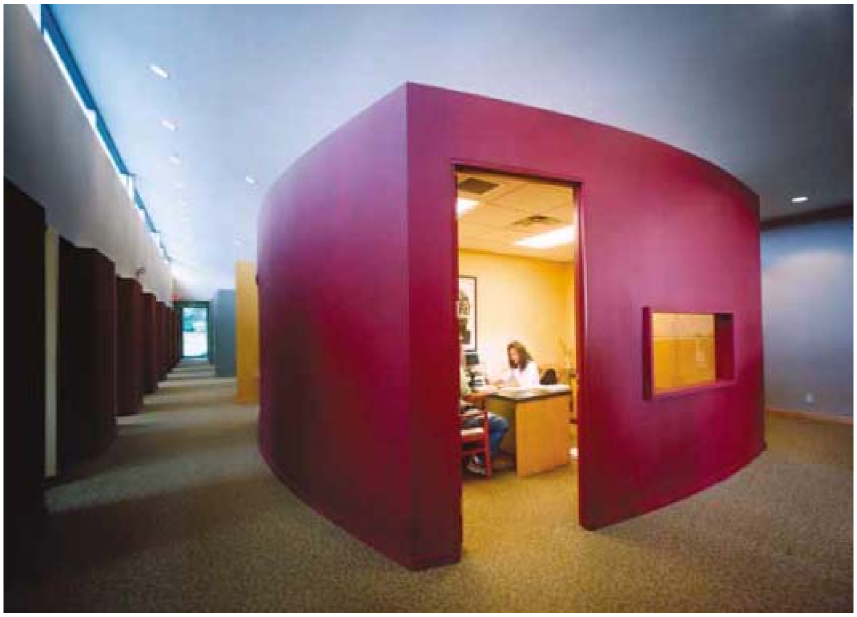
six windows of varying sizes perforate a burnished concrete-masonry-block wall embellished with panels of dark purple brick veneer. These south-facing rooms house charts, staff and dentists' offices, and mechanical functions. Above it all, a curved standing-seam roof bows southward.

Vital to the design was Dr. Dalseth's request for a green environment. The metal roof and cladding of stucco, fiber-cement panels, brick, and stone offer lasting materials. The field of prairie grasses—a low-maintenance landscape—not only creates a lush and serene natural setting, but also incorporates a self-perpetuating ecosystem with a pond that filters runoff before it reaches the water table. A geothermal system beneath the prairie grasses heats and cools the building. According to ALTUS, this method has already saved the client considerable money, which will cover the system's initial costs within two years. This energy efficiency reflects the architects' savvy decision making within the constraints of a modest budget of $155 per square foot.

Commentary

Alt credits his client with the courage to reinvent the image of suburban dentistry. In the two years since this building opened, the new-patient roster has doubled, with revenues rising 25 percent. Thanks to ALTUS and an enlightened dentist, a trip to this clinic can actually be relaxing. ■

The seemingly wild field provides a buffer between the waiting area and busy traffic intersection (above). From the dental chair, patients can enjoy views of nature (bottom right). Clerestory-lit, the building's central space contains sculptural forms, including the red-clad consulting room (right).



Yawkey Center for Outpatient Care

Boston, Massachusetts

3

CAMBRIDGE SEVEN AND MICHAEL FIELDMAN BRING ORDER AND AN ENGAGING PUBLIC FACE TO A LARGE CITY HOSPITAL COMPLEX.

By Clifford A. Pearson

Executive architect/urban design: *Cambridge Seven Associates—Charles Redmon, FAIA, design principal; Ron Baker, AIA, Adam Mitchell, AIA, James Puopolo, AIA, Rebecca Barone, Todd Cirillo, David Gifford, Achyut Kantawalla, Yong Joo Kim, Henry Recor, Barbara Reyes, John Sivills, Tom Walsh, David Wiborg, Alison Rowell, Sarah Redmon, Kwesi Arthur, project team*
Planning and design architect: *Michael Fieldman, Architect—Michael Fieldman, FAIA, design principal; Ed Rawlings, AIA, John Adamek, K.C. Cheung, Stefano Giubileo, Satoko Hoshino, Steven Kilian, Viola Rouhani, Jacob Zachariah, project team*
Historic architecture consultant: *Ann Beha Architects*
Fit-out architects: *Perkins + Will and Steffian Bradley Associates*
Client: *Massachusetts General Hospital*
Construction manager: *Walsh Brothers*

Size: *420,000 square feet*
Cost: *$165 million*
Completion date: *October 2004*

Sources
Curtain-wall framing: *Sota*
Aluminum panels: *Architectural Specialty Products*
Brise-soleil: *Ipswich Bay Glass*
Glazing: *Viricon*

For more information on this project, go to Projects at **www.architecturalrecord.com**.

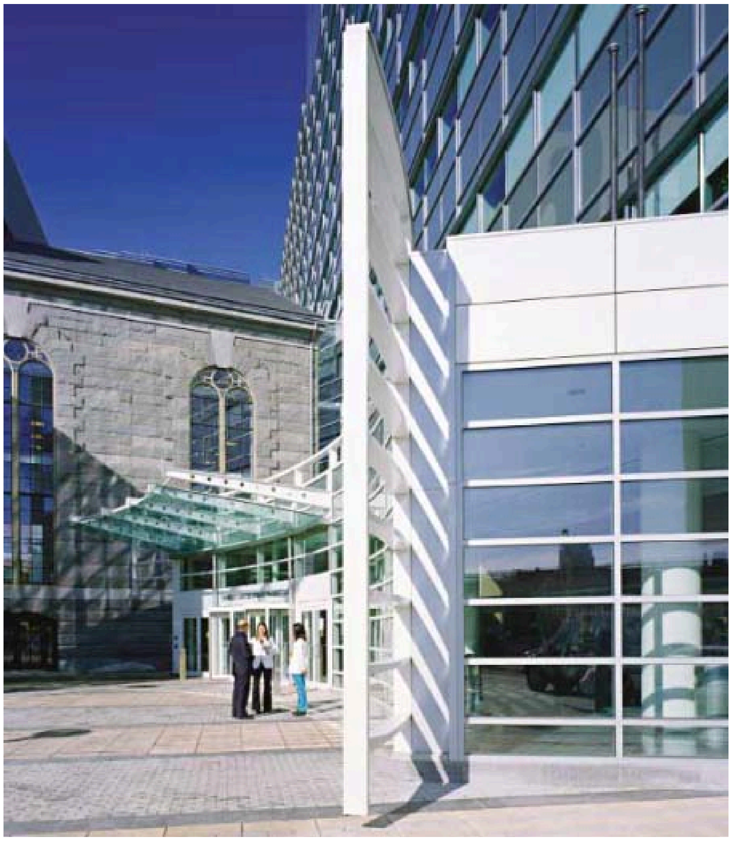
Adding a 440,000-square-foot clinic to an urban site already occupied by several buildings requires a talent for master planning, architecture, and logistics. Making the new facility work for patients and medical staff is no small feat, especially when the building has to attach to a historic structure and sit across the street from a busy transit station. All these constraints could have resulted in a seriously compromised design, but the team of architects working on the Yawkey Center for Outpatient Care at Massachusetts General Hospital (MGH) in Boston used them to emphasize the building's role in establishing connections with its neighbors.

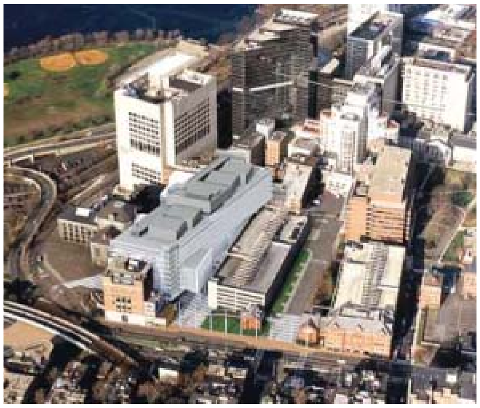
Program

Like many big-city hospitals, MGH had grown piecemeal over the years. Although its core was strong—a handsome 1930s structure called the White Building, designed by Shepley Bulfinch Richardson—it had become an ad hoc collection of facilities, rather than an efficient or attractive health-care campus. It also needed a new ambulatory-care building to bring together various outpatient services scattered throughout the hospital complex.

Solution

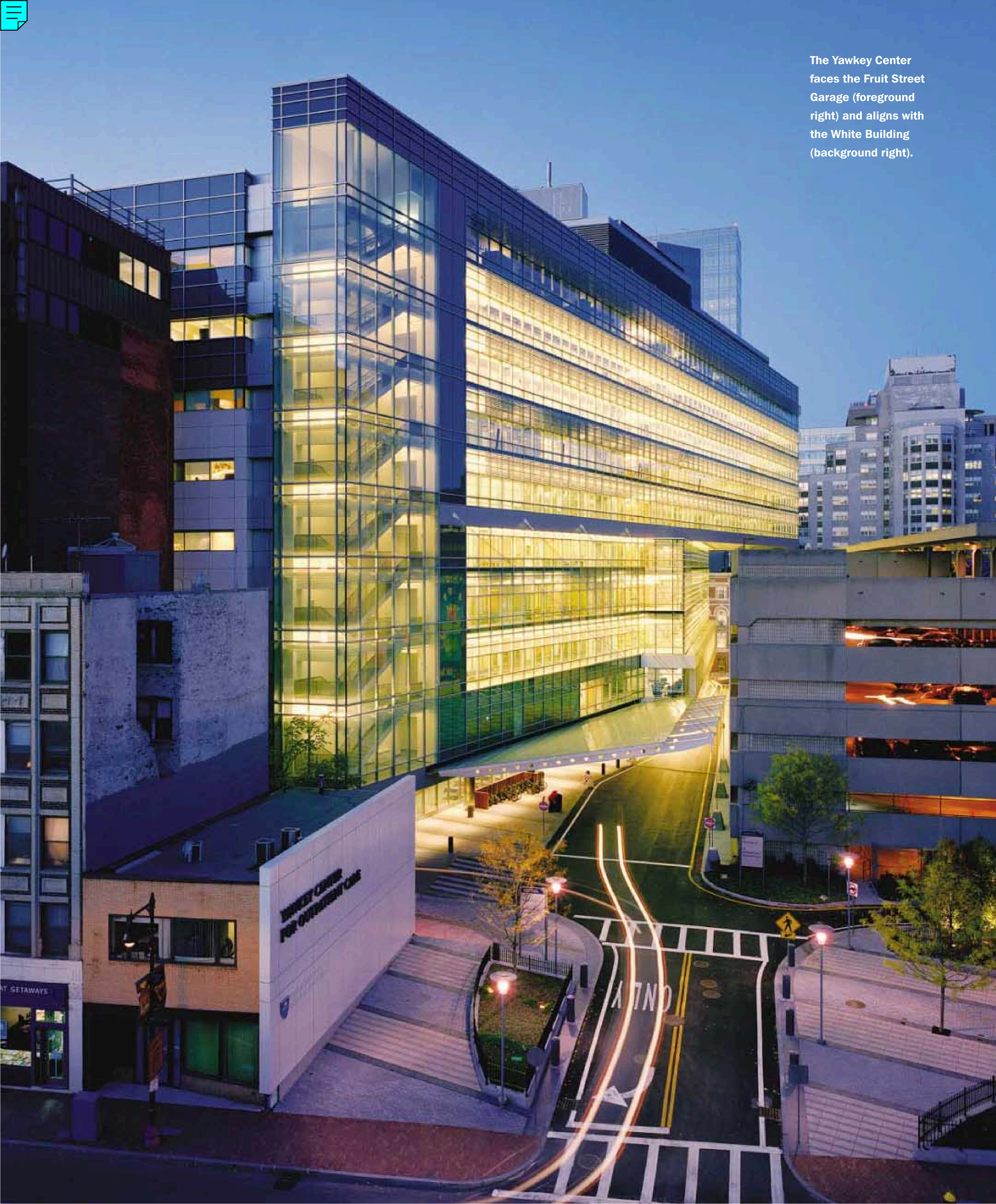
In 2000, the hospital invited about 20 architectural firms to compete for the job of designing a master plan that would bring order and



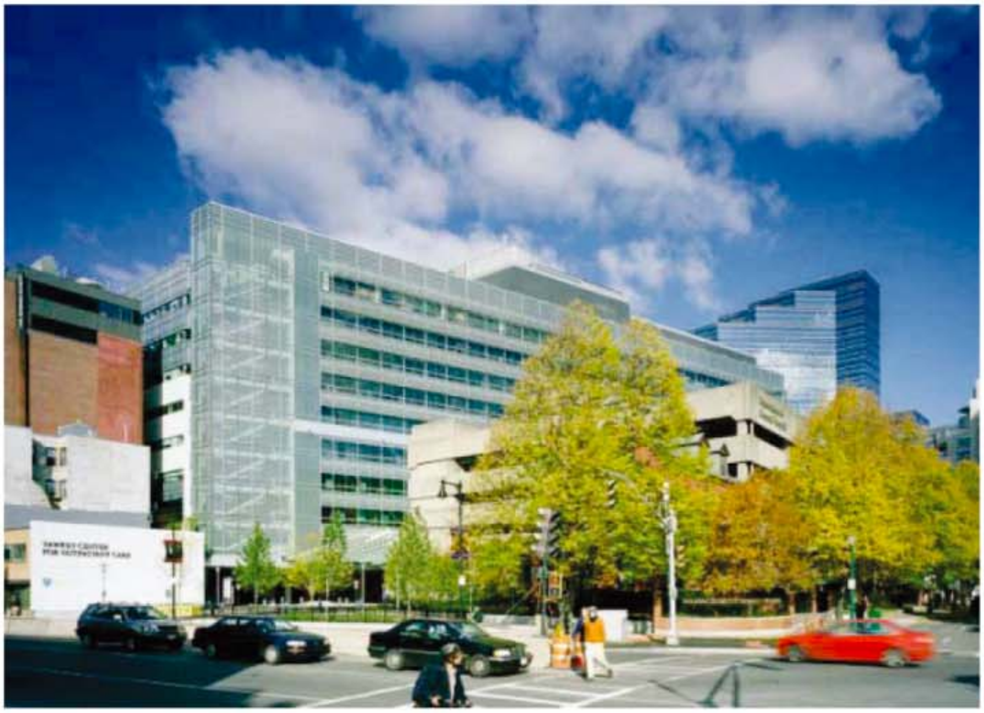


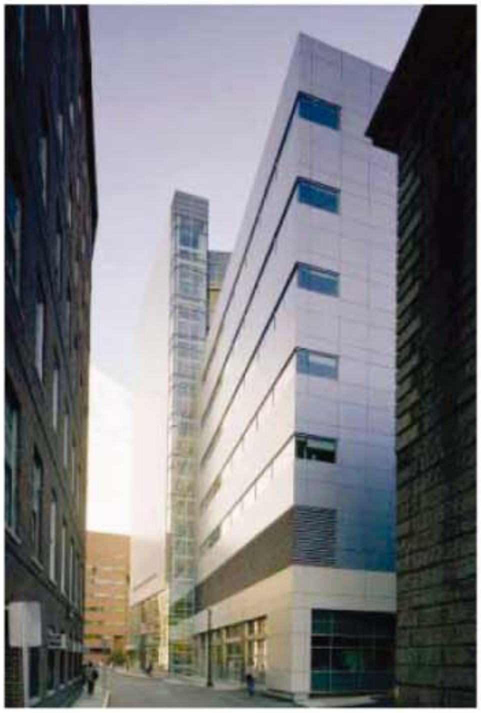
A photo collage shows a rendering of the ambulatory-care center inserted in its dense urban setting (left). An outdoor plaza (above) helps connect the historic Charles Street Jail to the new hospital building.

PHOTOGRAPHY: © BRUCE T. MARTIN


YAWKEY CENTER
FOR OUTPATIENT CARE
ONLY

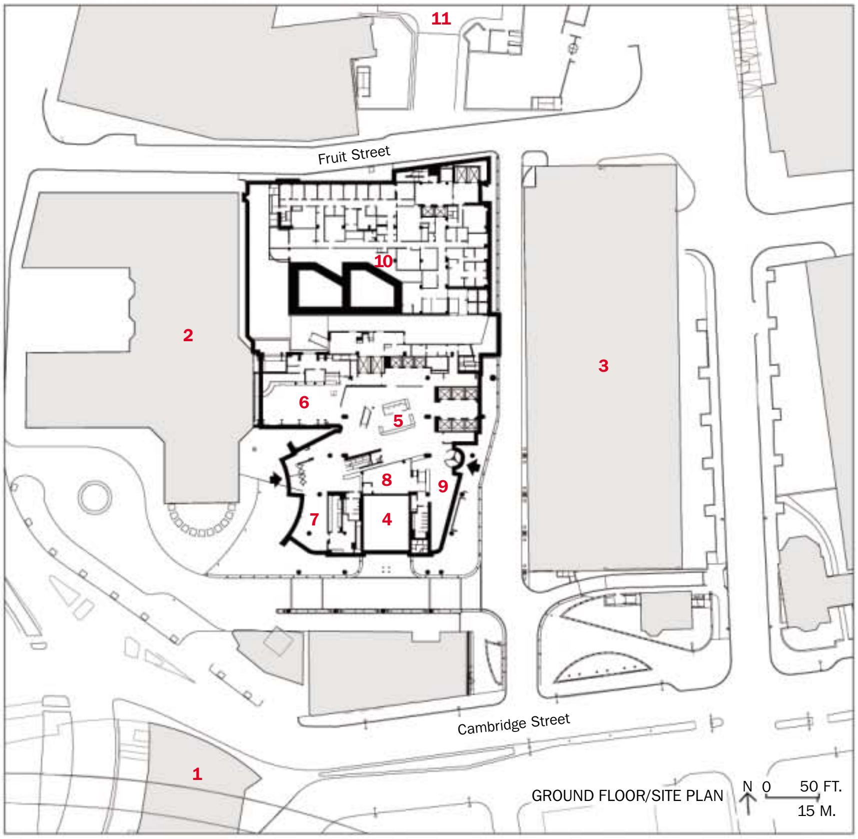
The Yawkey Center faces the Fruit Street Garage (foreground right) and aligns with the White Building (background right).

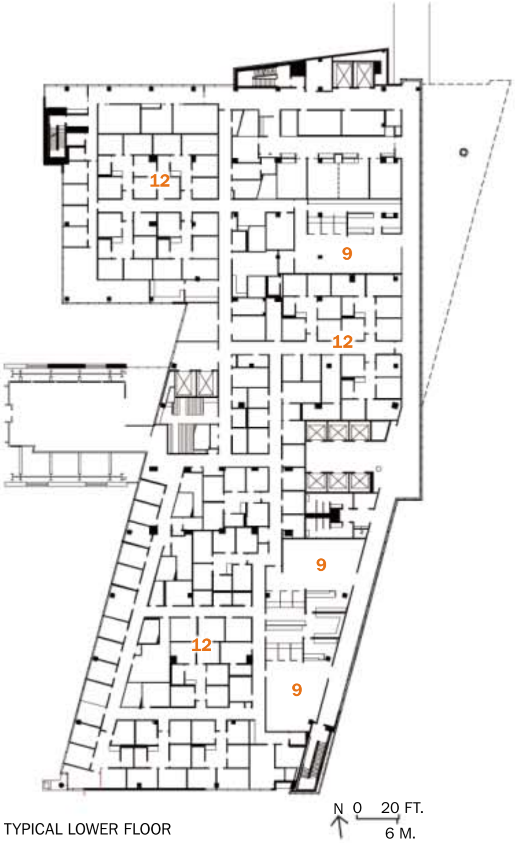




1. *Transit station*
2. *Old jail/future hotel*
3. *Fruit Street Garage*
4. *Entry to underground garage*
5. *Information*
6. *Café*
7. *Coffee shop*
8. *Gift shop*
9. *Waiting*
10. *Proton Center*
11. *Future addition*
12. *Clinical suite*

Where its site opens up, the building engages its neighbors with a glazed curtain wall (above left). Along narrow Fruit Street, though, the architects clad the building with aluminum panels and strip windows (above).


11
Fruit Street
10
2
3
6
5
8
9
7
4
Cambridge Street
1
GROUND FLOOR/SITE PLAN
N
0
50 FT.
15 M.


12
9
12
9
12
9
TYPICAL LOWER FLOOR
N
0
20 FT.
6 M.

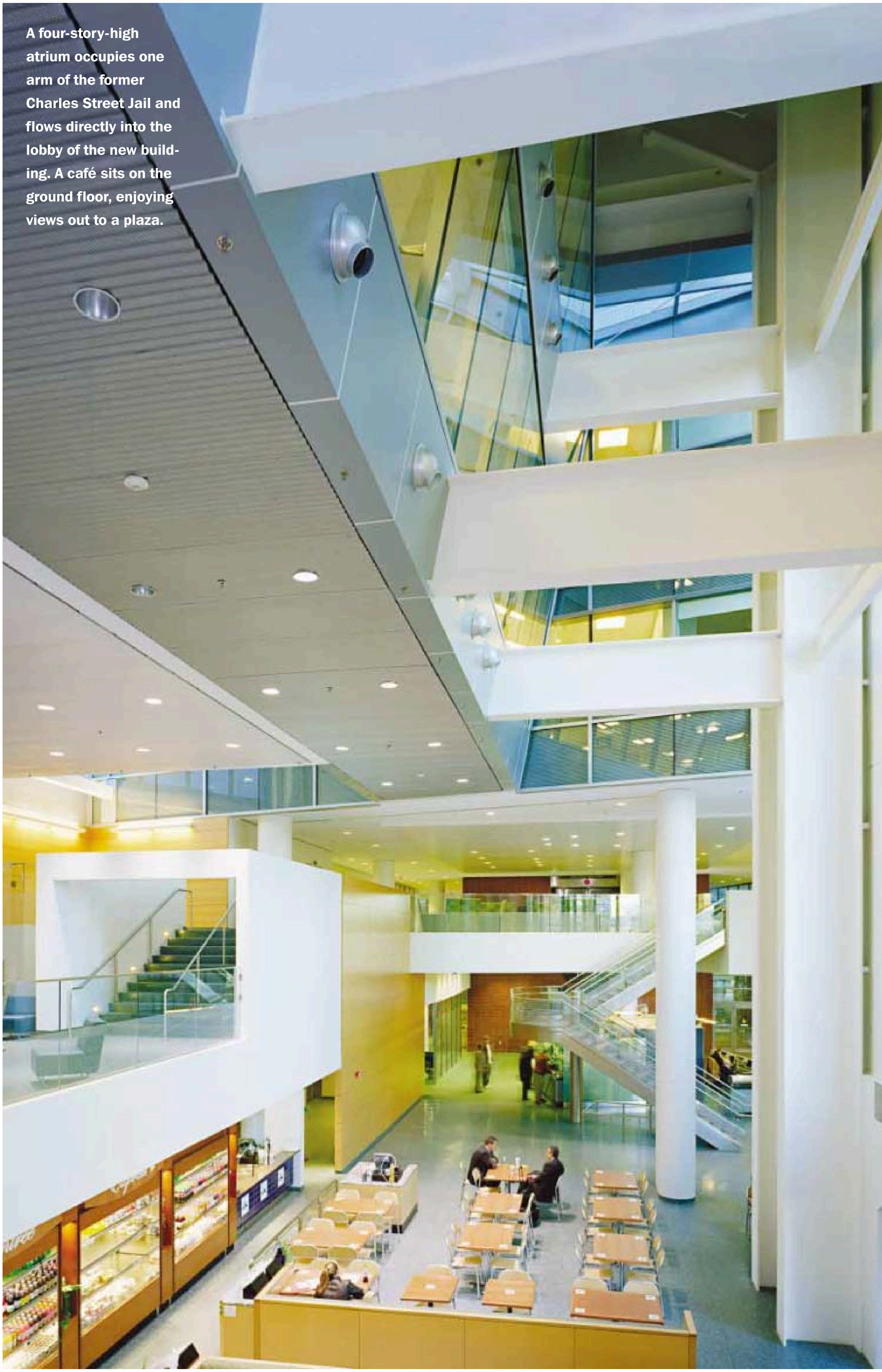
accommodate new growth. Cambridge Seven Associates and Michael Fieldman, Architect teamed up and won the commission by proposing a master plan that aligns development along a central wedge defined by two axes, each angled about 10 degrees from the center of the White Building. The plan handles growth by tearing down some older buildings and garages at the medical center, and creating underground parking with new buildings above.

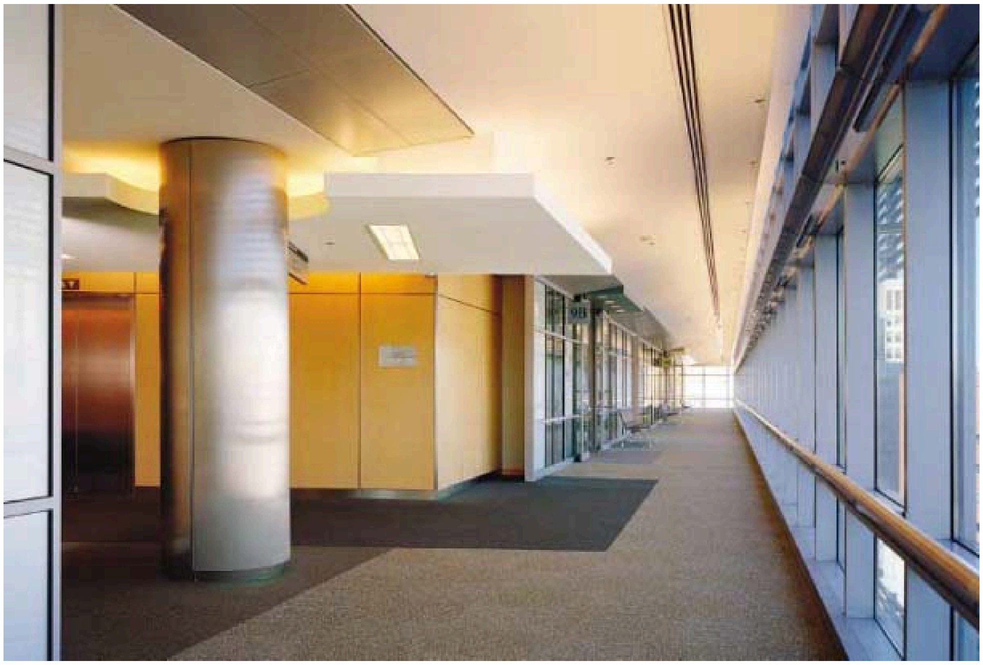
The architects positioned the first major component of the master plan, the Yawkey Center, to define the new west axis, aligned with Charles Street near the Charles River. This ambulatory-care center draws the hospital toward Cambridge Street to the south, engaging the campus with the Beacon Hill community and a renovated T station.

To the north, the Yawkey building literally engulfs the existing Northeast Proton Center, stripping away its exterior shell while retaining its high-tech core. The architects faced a different challenge to the west, where the Yawkey Center connects to the historic Charles Street Jail, an impressive stone structure that Cambridge Seven is now converting into a hotel. While the architects preserved most of the granite jail, they tore down part of its eastern wing, then rebuilt two of its bays as part of the new hospital building.

Future phases will extend the ambulatory center to a new building to the north (across Fruit Street) and then replace an existing garage on Fruit Street with more underground parking and a new meeting center.

Designed with an extensive glass-and-metal curtain wall toward the east, the Yawkey Center presents a Modern face to its neighbors and engages them with its transparent architecture. Aluminum brise-soleils on the upper floors protect the curtain wall from the full impact of the sun, while a generous glass-and-steel canopy covers the vehicular entry and almost touches the Fruit Street garage across the driveway.


A four-story-high atrium occupies one arm of the former Charles Street Jail and flows directly into the lobby of the new building. A café sits on the ground floor, enjoying views out to a plaza.



On the ground floor, the architects emphasized the public realm, designing a spacious lobby and waiting area off the vehicular entry and a coffee shop and café off a curving plaza facing the T station. The plaza also serves as an outdoor room connecting the old jail and the new hospital building.

Inside the rebuilt bays of the jail, Cambridge Seven and Michael Fieldman worked with historic consultant Ann Beha Architects to preserve the old shell while creating a four-story-high space with a café on the first floor, a lounge on the second, and offices above. By pulling the floor plates away from the old facade and creating a multistory space with views out the tall windows, the architects echoed the jail's sectional organization, explains Fieldman.

To bring daylight and views into medical areas, the architects organized clinics and waiting rooms along a single-loaded corridor just inside the building's glazed curtain wall. Clear- and opaque-glass partitions separating clinics and medical offices (designed by Perkins + Will and Steffian Bradley Associates) from the corridor allow daylight to filter deep inside.

Commentary

Corridors often give hospitals their dreary institutional feeling, but the sun-washed ones in the Yawkey Center create a lively setting for medical activities. The building's simple plan and use of daylight also help visitors with wayfinding, while its transparent face provides an attractive gateway to the entire hospital campus. ■

By placing the main corridor along the glazed east facade (middle and top left), the architects could bring daylight deep into the waiting rooms and clinical suites (left) on each floor. A lounge on the second floor (top right) overlooks the atrium in the eastern portion of the former jail building and will lead to the hotel now being constructed in the rest of the old jail.

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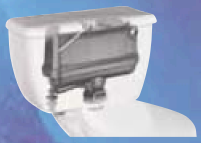

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Architectural Technology

As green-building standards mature, practitioners want to ensure they remain both rigorous and relevant

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At RPI, a new arts center features state-of-the-art studio space (150).

A saddle-curved entry beckons visitors to a Beijing planetarium (154).

IMAGE: COURTESY GRIMSHAW (TOP LEFT);
PHOTOGRAPHY: © FU XING (BOTTOM LEFT); ROBB WILLIAMSON (RIGHT)

Hardly a day goes by that we don't receive a fax or an e-mail announcing a project that's applying for LEED certification. In the five years since the U.S. Green Building Council released its standard for measuring the greenness of buildings, LEED has undoubtedly raised the public profile of sustainable design, with several U.S. cities adopting the standard for public construction, and new versions that are tailored for rating projects that involve existing buildings and commercial interiors. But the standard is not without its limitations—or its critics. In this month's main feature, writer Nancy Solomon takes a closer look at what the AEC community has been saying lately about LEED, and also delves briefly into other programs that are emerging in the green-building standards area. Sustainabilty is also the theme of the second feature this month—a summary of research projects that involve improving the energy efficiency of building systems, a topic under much discussion as oil prices continue to climb.

Speaking of research, we heard that architect Rafael Viñoly is offering fellowship grants of up to $60,000 to individuals who want to study issues and ideas relevant to architectural design and practice. Fellows of the program would have access to his firm's office in New York City, including the use of computers, a fabrication and model shop, and other resources. The firm is also hosting a 14-week series of master classes for professional practice, many taught by Viñoly himself, beginning in September 2005. It is rare for a firm to invest its own resources in this sort of effort for the profession—and we applaud the initiative. Space for both the fellowships and the master classes is limited to 15 people; you've got until July 1 to submit a proposal. For more information, visit the program's Web site at www.rvapr.com. We're looking forward to hearing what comes out of this ambitious undertaking. *Deborah Snoonian, P.E.*

(135).

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How Is LEED Faring After Five Years in Use?

THE BEST-KNOWN RATING SYSTEM FOR GREEN BUILDINGS IN THE UNITED STATES, LEED STRUGGLES WITH ITS OWN RAPID RISE IN POPULARITY

ARCHITECTURAL TECHNOLOGY

By Nancy B. Solomon, AIA

There is no question that Leadership in Energy and Environmental Design (LEED), the green-building rating system developed by the U.S. Green Building Council (USGBC), has been a success. After all, its original mission was one of market transformation. "In my professional career, no other tool has been as powerful in encouraging designers and builders to look at the environmental performance of buildings," says Bob Berkebile, FAIA, principal of BNIM Architects in Kansas City, Missouri, founding chairman of AIA Committee on the Environment (COTE), and former board member of USGBC.

Today, LEED has virtually become a household word. More and more projects have been registered, and LEED ratings increasingly find their way into marketing brochures distributed by developers, building owners, architects, and contractors. Accredited professionals proudly add "LEED" to their titles, and most significantly, numerous federal agencies and state and local governments require some form of LEED certification. Green architecture is no longer a fringe phenomenon.

Despite the fact that LEED has been—and remains—a critical tool in making this necessary transformation, it's far from perfect. Recent assessments of LEED from various sources have pointed out some of its more glaring flaws. This doesn't surprise many of its original developers. Referring to that pivotal moment when the decision was made to release a sustainable measurement tool that would address commercial office buildings, Berkebile recalls that the USGBC volunteers "knew that it was clumsy and limited, and many wanted to wait until it could be put on more scientific footing, but more wanted to get something out quickly." Berkebile continues, "What was shocking was that many agencies and cities so quickly embraced it as their tool, not realizing that it was not regional, did not do life-cycle analysis, and was focused on corporate buildings."

Regular RECORD *contributor Nancy B. Solomon, AIA, served for a year as editor of AIA's* Environmental Resource Guide.

The roof of the Moscone Convention Center in San Francisco supports 30,000 square feet of photovoltaic panels (installed by PowerLight Corporation), a technology encouraged by LEED.

CONTINUING EDUCATION

Use the following learning objectives to focus your study while reading this month's ARCHITECTURAL RECORD/ *AIA Continuing Education article. To receive credit, turn to page 142 and follow the instructions. Other opportunities to receive Continuing Education credits in this issue include the following multisponsored section: "Associations: Dynamic Connections for the Profession," page 163.*

LEARNING OBJECTIVES

After reading this article, you should be able to:

1. *Describe the changes that USGBC has instituted for LEED in the past five years.*
2. *Discuss the criticisms of the LEED rating system.*
3. *Identify issues in LEED scheduled for change.*

For this story and more continuing education, as well as links to sources, white papers, and products, go to ***www.architecturalrecord.com***.

The ABCs of LEED

In the early 1990s, many facets of the building sector appeared skeptical—if not outright hostile—about the green movement. The construction industry, like a tanker cruising in one direction, was not in a position to quickly or easily turn 180-degrees. For example, some building-product manufacturers, unprepared for questions regarding the environmental impact of their materials, were fearful of releasing proprietary information. And contractors, accustomed to certain business practices, saw no financial incentives in changing their ways. Although scientific evidence suggested that standard construction processes contributed to environmental degradation, no one was able to clearly quantify which methods were worse or which alternatives were better. The industry was still groping for a widely accepted definition and measurement of green building. Many sought a safe forum within which the different facets could consider the economical, environmental, and social costs and benefits generated by

PHOTOGRAPHY: COURTESY LIGHTPOWER CORPORATION

various design and construction options and could forge a path through the many unknowns to establish a workable, positive action plan.

The USGBC was formed in 1993 as a coalition of a handful of building-related organizations to serve this role. By 1995, staff and volunteers began to develop a digital measuring tool for sustainable buildings. Version 1.0 of LEED for New Construction (LEED-NC) was piloted in 1999, and version 2.0 publicly launched in March 2000. Since then, about 1,900 projects have registered to use LEED-NC, and another 200 have been certified under it.

CERTIFICATION IS BASED ON EVALUATION OF THE TEAM'S INTENT IN IMPROVING THE BUILDING'S PERFORMANCE.

The rating system is divided into six categories. Five address specific environmental concerns—sustainable sites, water efficiency, energy and atmosphere, materials and resources, and indoor environmental quality—and one is set aside for innovations that do not fit neatly in the others. The categories are broken down into specific design goals that have the potential to improve a building's environmental performance within that area of focus. Some of these goals are considered prerequisites to any LEED certification. Others are optional. Whether required or optional, each goal is worth one point. Certification is based on the evaluation of the design team's intent in improving the building's performance. For a project to be certified, 26 points must be achieved; 33 points for silver; 39 points for gold; and 52 points for platinum. A total of 69 points is theoretically possible.

Projects register early in the design process and receive tools to assist with documenting project performance. The current fees range from $750 for small projects (less than 75,000 square feet) that are submitted by members to $3,750 for large projects (greater than 300,000 square feet) that are submitted by nonmembers. A separate fee, ranging from $1,500 to $7,500, is charged at the time project documentation is presented for certification review. Thus, the total certification fees run from $2,250 for a member's small project to $11,250 for a nonmember's large project.

From the onset, USGBC recognized that LEED would have to evolve over time. LEED 2.1 came out in November 2002 to streamline the documentation process. In addition, starting in 1999, USGBC began to address the needs of different building markets by developing more than one LEED product. Spinning off the basic template for new construction, USGBC began to develop other rating systems for existing buildings (EB), commercial interiors (CI), core and shell projects (CS), homes (H), and neighborhood development (ND).

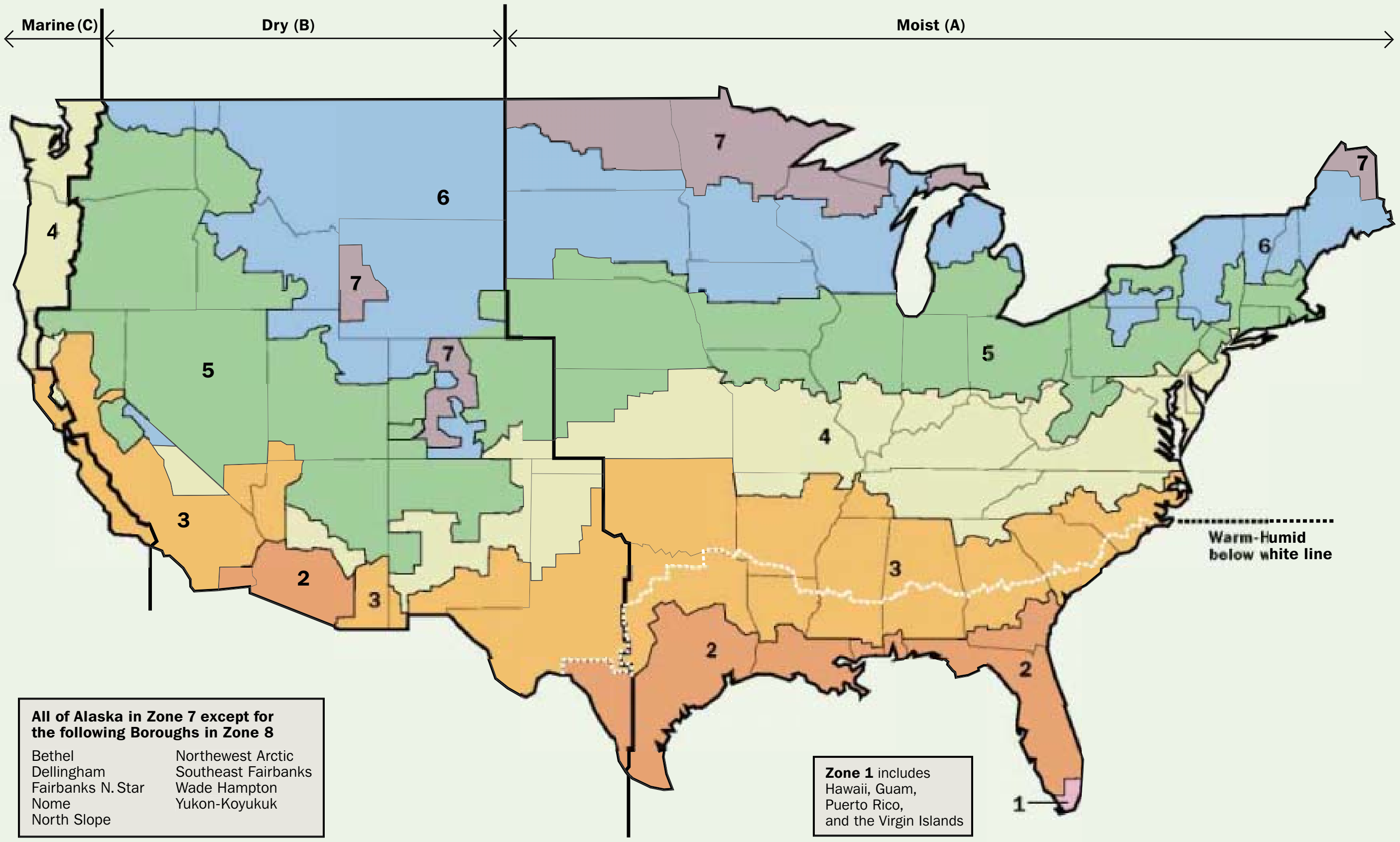
Assessing the assessment tool

Now that LEED has been available in one form or another for some five

The Montgomery Park Business Center in Baltimore (above) features a 20,000-square-foot green roof. Solar hot-water roof panels (far left) are installed on the Chesapeake Bay Foundation Philip Merrill Environmental Center. Centex Homes has built model residences (near left) in California with photovoltaic roof panels. Governors of Maryland and California have signed executive orders requiring some level of LEED certification for state projects.

PHOTOGRAPHY: © KATRIN SCHOLZ-BARTH (TOP RIGHT); DAVIS ENERGY GROUP (BOTTOM); ROBB WILLIAMSON (LEFT)

MAP OF DEPARTMENT OF ENERGY'S PROPOSED CLIMATE ZONES



All of Alaska in Zone 7 except for the following Boroughs in Zone 8

Bethel	Northewest Arctic
Dellingham	Southeast Fairbanks
Fairbanks N. Star	Wade Hampton
Nome	Yukon-Koyukuk
North Slope	

Zone 1 includes
Hawaii, Guam,
Puerto Rico,
and the Virgin Islands

The new International Energy Conservation Code defines climate zones geographically rather than climatically, reducing their number to eight from 19 and making compliance simpler. Current versions of LEED do not consider regional differences.

SOURCE: U.S. DEPARTMENT OF ENERGY

years, it's appropriate that the system has been reviewed externally and internally for various purposes. Among others, Chris Scheuer and Gregory Keoleian of the Center for Sustainable Systems at the University of Michigan evaluated LEED in a report for the National Institute of Standards and Technology titled "Evaluation of LEED Using Life-Cycle Assessment Methods," which was published in September 2002. Lisa Fay Matthiessen and Peter Morris of Davis Langdon analyzed the cost of green projects, including both those that did seek LEED certification and those that did not, and released their findings in a July 2004 document called "Costing Green: A Comprehensive Cost Database and Budgeting Methodology." This year, Auden Schendler, director of environmental affairs at Aspen Skiing Company, and Randy Udall of the Community Office for Resource Efficiency, both in Aspen, Colorado, coauthored a critique of LEED, called "LEED is Broken … Let's Fix It," that reads like a call to arms. And, although more politic in tone, Jay Stein and Rachel Reiss of Platts, a subscription Web division of The McGraw-Hill Companies, in their "Ensuring the Sustainability of Sustainability Design: What Designers Need to Know About LEED" point out inconsistencies and unknowns in the LEED system and suggest ways for designers to work around them.

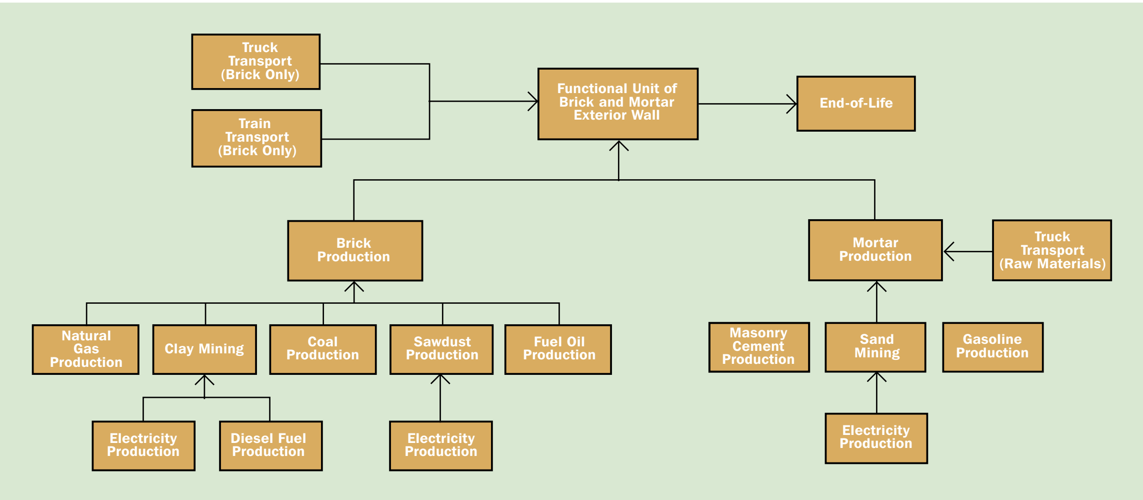
DESIGN STRATEGIES MUST TAKE INTO ACCOUNT LOCAL CLIMATE, GEOGRAPHY, RESOURCES, WILDLIFE, AND HABITAT.

Two big glitches

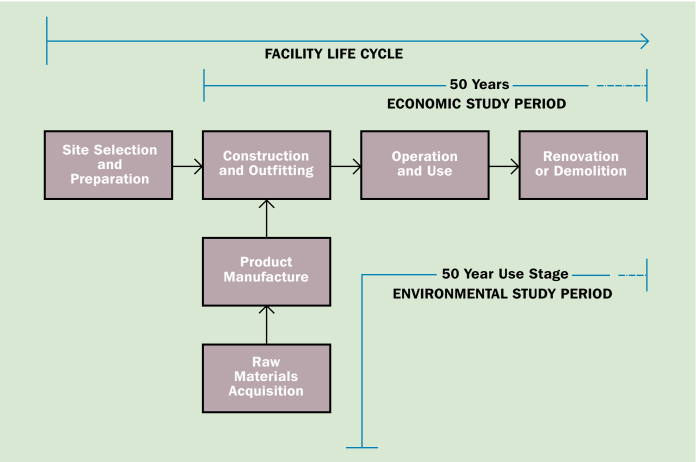
In its laudable desire to create a national rating protocol that could be easily understood and applied by all, USGBC developed a simple, universal system in which one goal, or credit, receives one point. From this seemingly reasonable structure, however, comes what appears to be two of the most fundamental criticisms of the current LEED framework: its bioregional insensitivity and its relatively tenuous connection to life-cycle analysis.

In truth, many sustainable design strategies are regional in character. They must take into account local climate, geography, resources, wildlife, and habitat. As Stein and Reiss note, "… water conservation is more of a priority in hot, dry climates, yet the USGBC awards the same number of credits for water conservation in Seattle as in Phoenix … ." One unintended consequence is that less environmentally conscientious design teams may choose the least expensive strategies recognized by LEED to get the respective credits, even though the implementation of those strategies

BRICK AND MORTAR FLOW CHART

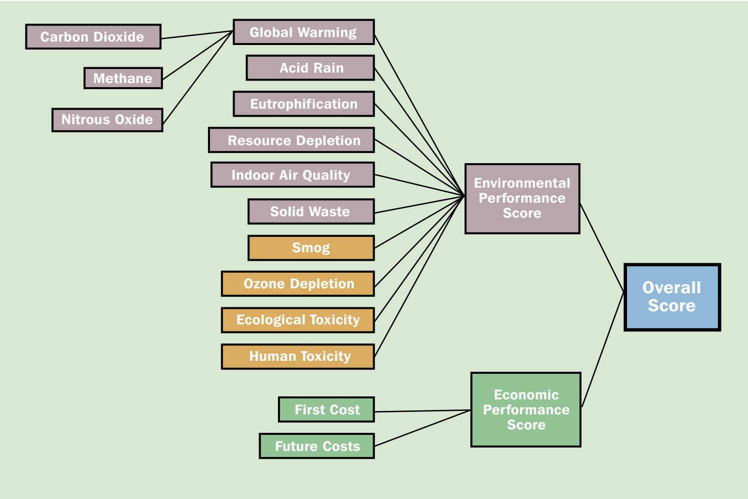

Truck Transport (Brick Only)
Train Transport (Brick Only)
Functional Unit of Brick and Mortar Exterior Wall
End-of-Life
Brick Production
Mortar Production
Truck Transport (Raw Materials)
Natural Gas Production
Clay Mining
Coal Production
Sawdust Production
Fuel Oil Production
Masonry Cement Production
Sand Mining
Gasoline Production
Electricity Production
Diesel Fuel Production
Electricity Production
Electricity Production

LIFE-CYCLE COST METHOD


FACILITY LIFE CYCLE
50 Years
ECONOMIC STUDY PERIOD
Site Selection and Preparation
Construction and Outfitting
Operation and Use
Renovation or Demolition
Product Manufacture
Raw Materials Acquisition
50 Year Use Stage
ENVIRONMENTAL STUDY PERIOD

SOURCE FOR ALL CHARTS: OFFICE OF APPLIED ECONOMICS, NIST

DERIVING THE BEES OVERALL PERFORMANCE SCORE


Carbon Dioxide
Methane
Nitrous Oxide
Global Warming
Acid Rain
Eutrophication
Resource Depletion
Indoor Air Quality
Solid Waste
Smog
Ozone Depletion
Ecological Toxicity
Human Toxicity
Environmental Performance Score
Overall Score
First Cost
Future Costs
Economic Performance Score

The Building for Environmental and Economic Sustainability (BEES) measures the environmental performance of building products by using life-cycle assessments. The BEES 3.0 model (bottom right) shows how the overall performance score is derived. The flow diagram (left) shows the major elements of brick and mortar production, while the life-cycle cost method is used to measure building performance (bottom left).

may not substantially improve the project's sustainable contribution.

Life-cycle analysis, or LCA, refers to the scientific discipline of measuring the material resources and energy consumed, and the environmental impact created, by a particular product throughout its life. By comparing this data for alternative products, designers could—at least in theory—select the materials and components that cause the least environmental damage. But LEED's one-point-per-credit structure doesn't encourage this more sophisticated analysis. Stein and Reiss continue, "… when designing renovation projects, developers can save more material resources by reusing 75 percent of an existing building's structure and shell … than by incorporating at least 5 percent of salvaged or reused building materials, but both strategies earn one point in the LEED rating."

SOME COMPLAIN ABOUT THE TIME AND PAPERWORK INVOLVED IN DOCUMENTING APPLICABLE STRATEGIES FOR LEED.

Additional concerns

Many accuse LEED of being too bureaucratic. Some complain about the time and paperwork involved in documenting applicable strategies. Others point to USGBC's reliance on just one wood certification program—Forest Stewardship Council—as too narrow-minded. And yet others describe experiences in which LEED certifiers got so bogged down by technical details that they lost sight of the tremendous environmental progress being made right before their eyes by noteworthy design and practice strategies.

The list of complaints and suggestions go on—from frustration with the cost of pursuing certification and a confusing energy-modeling protocol to a proposal that the final evaluation be based on environmental-health indicators (from habitat diversity to water quality) after the building is up and running.

Peer pressure

In addition to external critiques, LEED is facing its first potential competitor—Green Globes, a Web-based sustainable design tool for new commercial construction. First released for the Canadian market several years ago, Green Globes was adapted and brought to the U.S. in 2004 by the Green Building Initiative (www.thegbi.org), which got its start working with the National Association of Home Builders to promote the association's Model Green Home Building Guidelines. In a March 2005 article in *Environmental Building News*, Nadav Malin wrote that "GBI is supported by the Wood Promotion Network and a number of other industry groups that object to some provisions in LEED … ."

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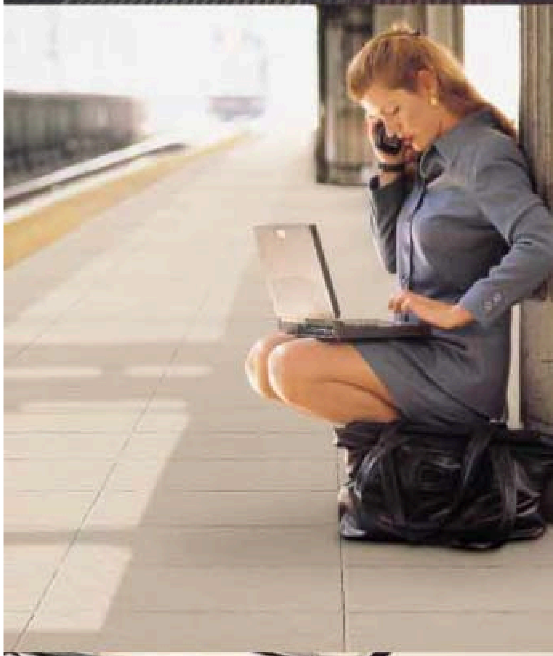

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Although Green Globes offers some features not currently in LEED—including its online platform and links to energy-modeling and LCA software tools—it still lacks many of the characteristics that give LEED its strength. According to Vivian Manasc of Manasc Isaac Architects in Edmonton, Alberta, a founding member of Canada's Green Building Council, "No other rating system is as broadly based in the marketplace as is LEED. With USGBC's 4,000-plus members getting to vote on what is in the rating system, LEED has large public input. It's easy to write an elegant system as long as you don't have to deal with the messiness of the marketplace."

USGBC plans on the horizon

To a great extent, LEED is suffering from its own success. Because there was such a great need for environmental guidance, people latched onto it so quickly—and demanded so many versions for different building types—that USGBC has yet to have enough time and resources to fully refine and add depth to the original model. Nonetheless, says Peter Templeton, USGBC director of LEED and international programs, "We are very much listening to the feedback."

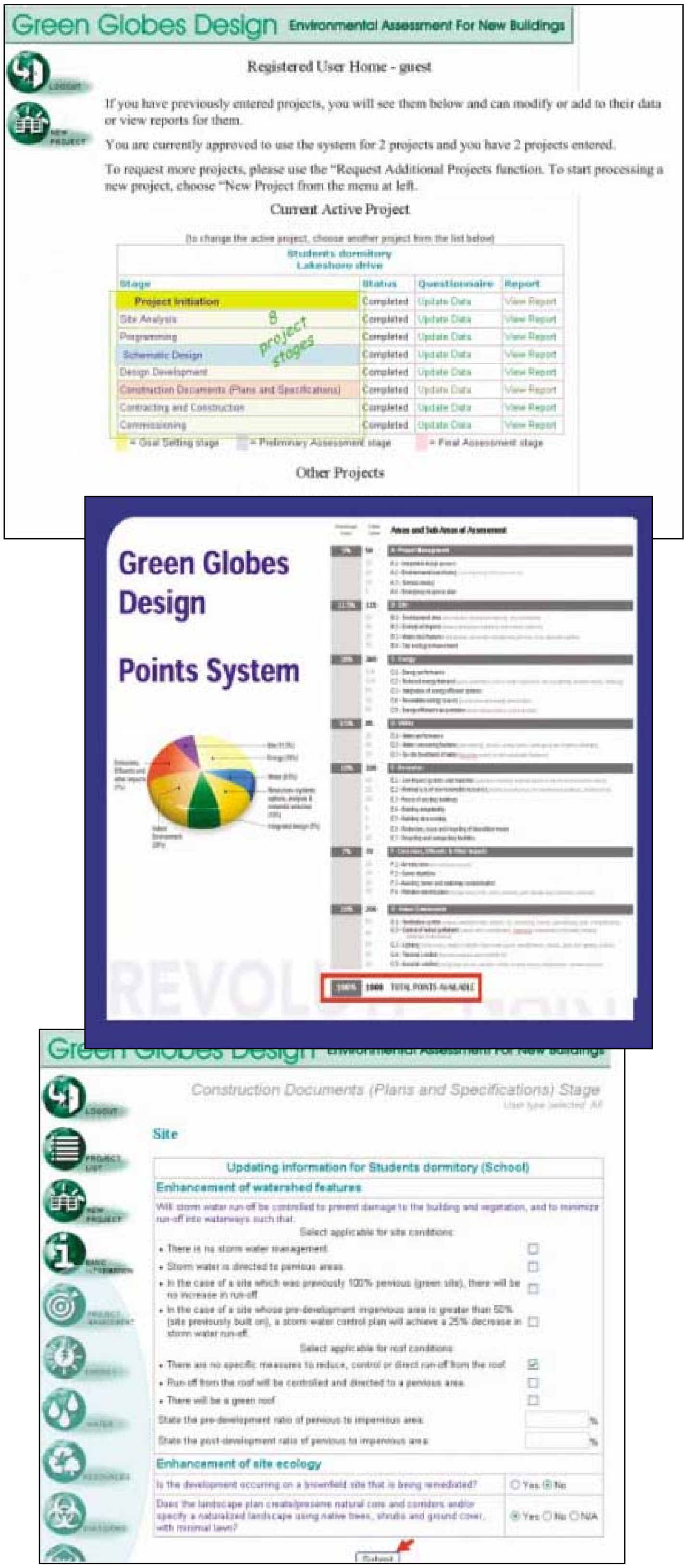
Templeton believes some concerns will be addressed in LEED 2.2, which is currently under development for tentative release in the fall. For example, this version will reference the 2004 edition of ASHRAE 90.1, thereby avoiding the vexing energy-modeling problem created by the 1999 version of the standard. It will also include an online tool that promises to be more user-friendly and cut down on the paperwork. Templeton expects other changes in the documentation and review process to make it easier for applicants to cope with the administrative process. And he anticipates some refinement in the credits themselves.

Larger, more structural plans are being considered down the road for LEED version 3.0, which Nigel Howard, vice president of LEED and international programs at USGBC, believes will be a template toward which all the LEED products can gradually progress according to their respective timetables. Says Howard, "We don't envision making LEED 3.0 more stringent—but we want to make it much smarter."

"WE DON'T ENVISION MAKING LEED 3.0 MORE STRINGENT—BUT WE WANT TO MAKE IT MUCH SMARTER."

As an example, Howard suggests an ecological index for sustainable sites. In this scenario, there could be a greater range of possible points, depending on the potential impact of a project on its local habitat. A project built on a derelict site with no species of flora and fauna will show a net improvement—and therefore earn more points—if part of the area is landscaped. And a project built on woodland could be penalized to a greater extent than one built on farmland, because the original woodland would have had far more ecological diversity to start with than the farmland, and therefore the construction would have a greater negative effect on site conditions.

Howard suggests that LEED will be increasingly underpinned by LCA-type thinking, although he is quick to point out that some important sustainable design issues are not typically addressed by LCA. "Traditional LCA has focused on materials and products," he explains. It tends to look at global impact (such as loss of natural resources and toxic emissions) rather than local impact (such as storm-water management and light pollution) or interior consequences (such as thermal comfort and views of nature). Searching for the right mix, USGBC recently established a committee to consider the role of LCA within LEED and the appropriate


Green Globes Design Environmental Assessment For New Buildings
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Current Active Project

(to change the active project, choose another project from the list below)

Students dormitory
Lakeshore drive

Stage	Status	Questionnaire	Report
Project Initiation	Completed	Update Data	View Report
Site Analysis	Completed	Update Data	View Report
Programming	Completed	Update Data	View Report
Schematic Design	Completed	Update Data	View Report
Design Development	Completed	Update Data	View Report
Construction Documents (Plans and Specifications)	Completed	Update Data	View Report
Contracting and Construction	Completed	Update Data	View Report
Commissioning	Completed	Update Data	View Report

8 project stages

🟨 = Goal Setting stage ▨ = Preliminary Assessment stage 🟥 = Final Assessment stage

Other Projects

Green Globes Design
Points System
Areas and Sub Areas of Assessment
1000 TOTAL POINTS AVAILABLE
REVOLUTION

Construction Documents (Plans and Specifications) Stage
User type selected: All

Site

Updating information for Students dormitory (School)

Enhancement of watershed features

Will storm water run-off be controlled to prevent damage to the building and vegetation, and to minimize run-off into waterways such that:

Select applicable for site conditions:

- There is no storm water management. ☐
- Storm water is directed to pervious areas. ☐
- In the case of a site which was previously 100% pervious (green site), there will be no increase in run-off ☐
- In the case of a site whose pre-development impervious area is greater than 50% (site previously built on), a storm water control plan will achieve a 25% decrease in storm water run-off ☐

Select applicable for roof conditions:

- There are no specific measures to reduce, control or direct run-off from the roof ☑
- Run-off from the roof will be controlled and directed to a pervious area. ☐
- There will be a green roof ☐

State the pre-development ratio of pervious to impervious area: ______ %

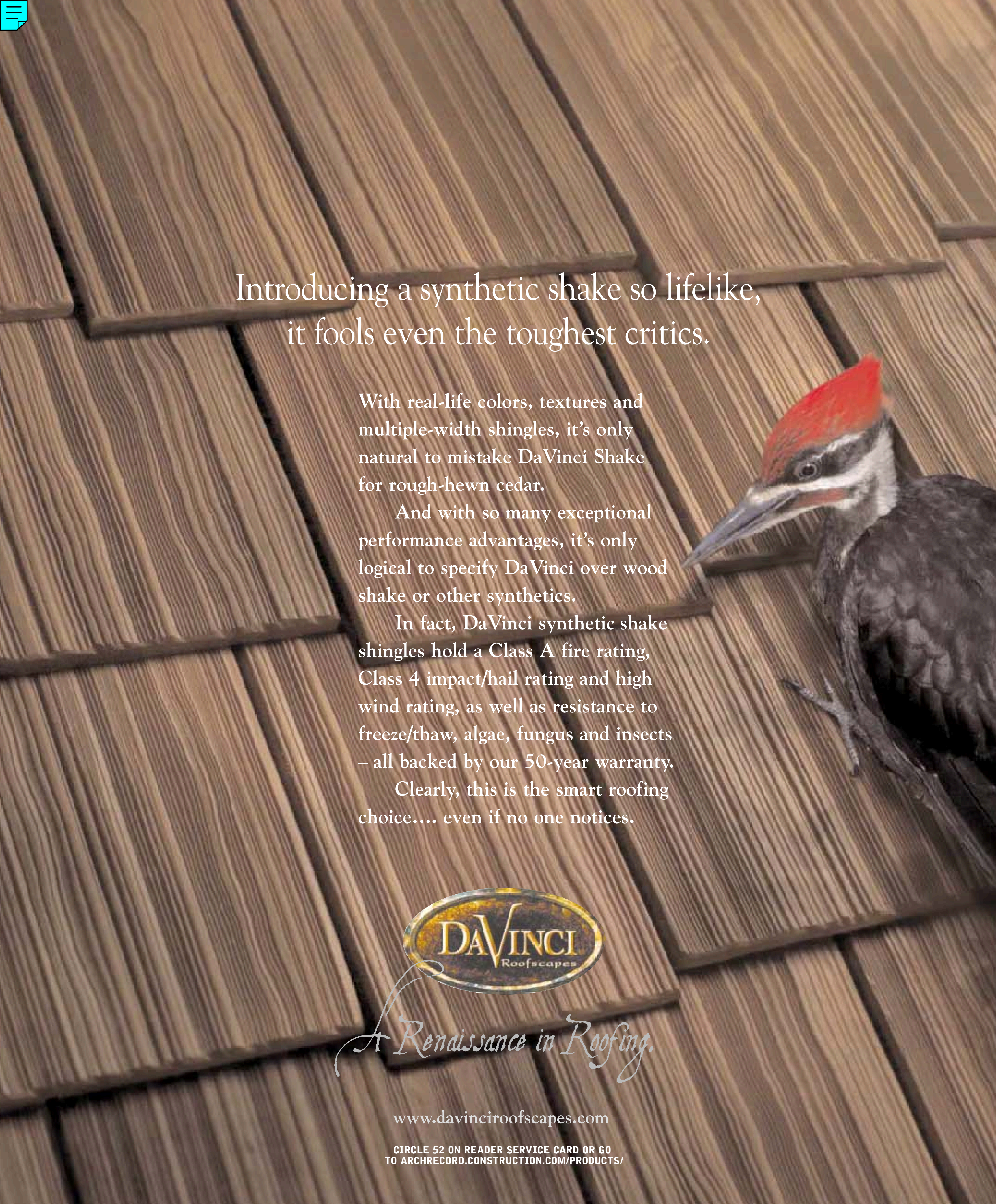
State the post-development ratio of pervious to impervious area: ______ %

Enhancement of site ecology

Is the development occuring on a brownfield site that is being remediated?	○ Yes ● No
Does the landscape plan create/preserve natural cors and corridors and/or specify a naturalized landscape using native trees, shrubs and ground cover, with minimal lawn?	● Yes ○ No ○ N/A

SOURCE: NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY

A Web-based performance tool from Canada, Green Globes is being introduced to the U.S. market as an alternative to the LEED Rating System. Green Globes consists of a series of questionnaires, customized by project phase and the role of the user in the design team. A total of eight design phases are supported.



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methodology, data, and tools that would be needed to make it a reality.

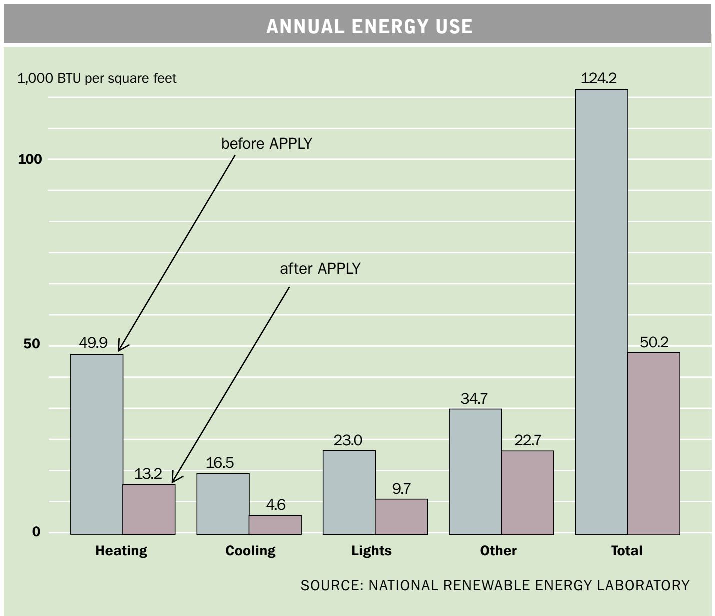
Last, but not least, Howard expects that LEED 3.0 will establish bioregionally weighted credits in order to reward those strategies that offer environmental benefits appropriate to a specific locale.

The future of green

It's hard to know if USGBC's anticipated changes will satisfy all the critics, or come quickly enough for them. But those who have long been at the forefront of this movement take a broad view of the situation.

> **LEED 3.0 WILL ESTABLISH BIOREGIONALLY WEIGHTED CREDITS IN ORDER TO REWARD THOSE STRATEGIES APPROPRIATE TO A SPECIFIC LOCALE.**

Practitioners like Bill Reed, AIA, vice president of integrative design for Natural Logic in Arlington, Massachusetts, see LEED as part of a larger, more comprehensive, and more far-reaching process. When potential clients call him about doing a LEED project, he tells them, "We don't just do LEED. We work at the restorative level." The fact that people are calling and asking the questions is demonstration enough that LEED has been a resounding success. "I think LEED is serving its intended purpose," says Reed, "but it is not the *ultimate* purpose." ■



SOURCE: NATIONAL RENEWABLE ENERGY LABORATORY

ENERGY-10, a PC-based design tool, helps architects quickly identify the most cost-effective, energy-saving measures for small buildings. APPLY is a special feature that provides a quick way to determine the combined effect of a group of strategies.

AIA/ARCHITECTURAL RECORD CONTINUING EDUCATION

INSTRUCTIONS

- ◆ **Read the article "How Is LEED Faring After Five Years in Use?" using the learning objectives provided.**
- ◆ **Complete the questions below, then fill in your answers (page 224).**
- ◆ **Fill out and submit the AIA/CES education reporting form (page 224) or download the form at www.architecturalrecord.com to receive one AIA learning unit.**

QUESTIONS

1. The original mission of the United States Green Building Council (USGBC) was which?
a. to increase availability of environmentally friendly materials
b. to increase use of certified professionals
c. to transform the environmentally friendly materials market
d. to transform the building and design market

2. The LEED rating system addresses what type of concerns?
a. innovative
b. environmental
c. measurement
d. evolutionary

3. The letters "NC" after the letters "LEED" stand for what?
a. noncommittal
b. noncommercial
c. new construction
d. new commercial

4. LEED is criticized for not giving enough distinction in which area?
a. life-cycle analysis based on environmental impact
b. atmospheric pollutants based on air movement
c. sustainable design strategies based on regional climate
d. a and c

5. LEED certification is based on which?
a. the design team's intent in improving the building
b. the actual performance of the completed building
c. the number of LEED-certified professionals involved with the architectural design of the building
d. the amount of environmental damage it prevents

6. A sustainable design tool in direct competition with LEED is which of the following?
a. green acres
b. green globes
c. green peace
d. green guidelines

7. In the early 1990s, the construction industry was skeptical of the green movement for all of the following reasons except which?
a. fear of releasing proprietary information
b. there already was a positive action plan in place
c. lack of quantifiable evidence as to which construction methods were the worst
d. a system of professional training and certification

8. Version 2.2 of LEED, scheduled for release in fall 2005, will address all of the following concerns except which?
a. stringency
b. online tools
c. energy-modeling problems
d. documentation process

9. The letters "EB" after the letters "LEED" stand for which?
a. environmental building
b. energy building
c. existing building
d. efficient building

10. The Green Building Initiative got its start working with which association?
a. Energy and Environment Canada
b. Building Owners and Managers Association of Canada
c. National Association of Home Builders
d. Canada's Green Building Council

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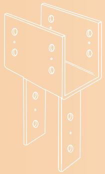

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Spotlight on Systems Research

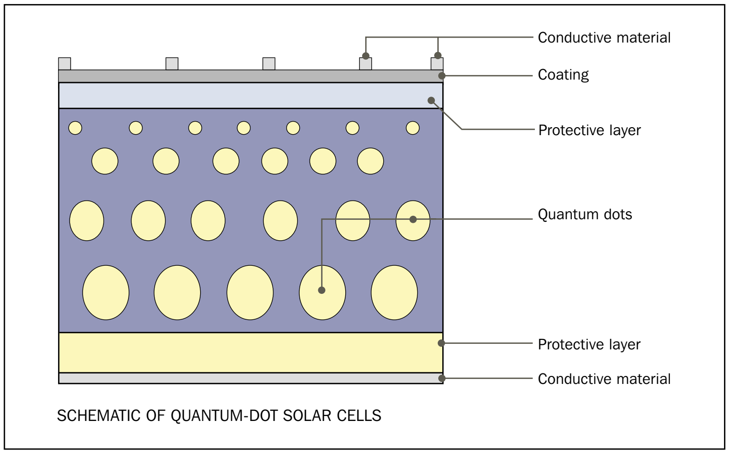
FOUR UNIVERSITIES STRIVE TO IMPROVE THE WAY LIGHTING SYSTEMS, SOLAR-HARVESTING TECHNOLOGIES, AND HVAC WORK

Behind every technological breakthrough that grabs headlines are scores of smaller-scale studies aimed at improving the way existing products and systems work. Often, the innovations in product or system design that result from such studies are difficult to envision: Who could have guessed that the chunky blocks of plastic that passed for mobile phones 15 years ago would evolve into the multifunctional, slim-as-a-credit-card fashion accessories they are today? In this feature—really a series of four featurettes—we highlight research projects in energy efficiency that point the way toward substantial improvements in the way buildings use (or harvest) power. How about thin, flexible solar cells that can be ordered by the roll, like paper? Or using your laptop to dim the lights and turn off the air-conditioning in your office when you step out at lunchtime? The science behind these scenarios is there, even if all the technological details and cost issues haven't been resolved yet. As energy prices remain uncertain, it's likely that owners will have more incentives in the future to employ strategies that curtail energy usage, whether for retrofits or new construction. Imagining what form those solutions might take—as these researchers are doing—is half the fun. *Deborah Snoonian, P.E.*

Tapping solar radiation's unseen benefits

Most designers think of sunlight as a destructive force when it comes to surface treatments. They look for UV-stable paints and coatings, and calculate life-cycle costs with the expectation of regularly replacing exposed surfaces. But recent advances in materials science point to coverings—even paints and fabrics—that double as solar cells. Instead of worrying about the deleterious effects of the sun, designers could look forward to using a variety of building materials that have embedded energy-producing capacity.

Researchers at the University of Toronto, in Canada, have expanded the range of solar radiation that such materials can harvest, tapping infrared rays as well as the visible spectrum of light (current solar technology works in the visible spectrum only). This could boost the efficiency of new photovoltaic materials and make them more affordable; it also opens the way for cheap infrared cameras, which could figure in building-security systems.



This diagram shows the design of a flexible solar cell containing a layer of "quantum dots" that harvest sunlight, pioneered by the University of Toronto.

The researchers' infrared-active colloidal "quantum dots" are made up of lead sulfur nanocrystals and semiconducting plastic. By changing the size of the nanocrystals, the researchers can "tune" the quantum dots to absorb wavelengths from 800 to 2,000 nanometers.

Within five years or so, architects and builders might be able to specify rolls of thin, lightweight, and flexible plastic solar sheeting, made by spraying a solvent containing the nanocrystals onto a thin, flexible substrate within a controlled manufacturing environment.

Ted Smalley Bowen is a Boston-based freelancer who writes frequently for RECORD *about technology. Contact him at ted_bowen@hotmail.com.*

Peter Criscione, a research associate at Platts, a division of The McGraw-Hill Companies, in Boulder, Colorado, writes about building technologies, including weatherization, HVAC, and systems for natural ventilation and lighting.

Traditional silicon-based solar panels (top) are often derided for being clunky and expensive. Researchers at Georgia Tech are making organic solar cells that are thin and flexible (above).

PHOTOGRAPHY: © ROYALTY-FREE/CORBIS (TOP);
COURTESY GEORGIA INSTITUTE OF TECHNOLOGY (BOTTOM)

Manufacturers might also choose to coat glass or metal surfaces with the solvent, according to lead researcher Ted Sargent, a University of Toronto professor of electrical and computer engineering. Applying the solvent like paint to such materials in the field won't work, says Sargent, because the process needs to be carried out in a controlled, clean environment to be successful.

Lightweight and flexible solar cells would do away with many of the limitations of current silicon-based PV cells, which are heavy, breakable, bulky, and relatively expensive to install. The quantum dots could also be used to make thermal photovoltaic cells, tapping infrared radiation from fuel-fired sources, and for medical diagnostics, using infrared light to screen for cancer, according to the researchers.

The ability to harness infrared radiation could make solar energy more practical in more geographic areas, "assuming there's some total power-production rate threshold that has to be met before the approach becomes economical in a given area," Sargent said. "There is a mild advantage in that some infrared light makes it better through clouds, but the main point is that harvesting infrared as well as the visible wavelengths results in more power harvested."

The quantum dots represent an early stage in the evolution toward commercially available solar cells. But their internal quantum efficiency—the amount of photons absorbed that actually reach the electrical circuit and are turned into usable energy—is just 3 percent, compared to 90 percent for most PV cells now on the market. The researchers are working on increasing this number, along with the quantum dots' absorption of external light and their external power efficiency, or the ability to harvest the sun's power efficiently over the entire spectrum, absorbing more light at multiple wavelengths and ensuring that the efficiencies are additive, Sargent said.

Researchers are also addressing the environmental trade-offs in making solar cells, a process that's energy-intensive and involves hazardous chemicals. The lead sulfide nanoparticles in the Toronto study "need to be encapsulated, and an end-of-life strategy is needed, such as recycling of the materials," Sargent said. He noted that the lead sulfide is "a showcase for the technology. The approach illustrates the value of infrared harvesting cheaply and flexibly. Once we or others develop even more innocuous materials that do the same thing, they will be adopted."

Creating a process for making any material a solar collector by applying quantum dots is a step in the right direction, said Alexis Karolides, an architect and green-building consultant with the Rocky Mountain Institute. "Instead of asking how much can we increase the efficiency of current photovoltaic technology, we need to ask what's possible," she said.

Down the road, embedded solar cells and solar sheeting will need to be integrated with building control systems and power storage technologies like hydrogen fuel cells, according to Sargent. "Presumably, the days when the sun is shining don't correspond identically with your power needs—so you might think of looking at power harvesting and storage problems together, in an integrated fashion." *Ted Smalley Bowen*

Going solar could mean going organic

Despite their advantages, there are many reasons to look for alternatives to existing silicon-based photovoltaic (PV) cells. Heavy, bulky, brittle, and aesthetically compromised, the older designs require clean-room manufacturing facilities, and are made using some less-than-clean materials and processes. Transportation and installation can also be expensive, resulting in higher capital costs.

Thin-film solar cells made of amorphous silicon and other materials address some of the drawbacks of current PV cells, including weight and flexibility—but some of these newer technologies raise environmental and safety questions of their own. More promising, but earlier in development, are organic solar cells, which have the potential to be relatively cheap, easier and cleaner to produce, and more versatile than existing solar technology.

Researchers at the Georgia Institute of Technology have developed a lightweight, flexible, organic photovoltaic cell using pentacene, a polycrystalline organic semiconductor, and the carbon molecule C60. Pentacene is often used in research on transistors, and C60 is in the family of carbon molecules commonly referred to as "buckyballs," named for their resemblance to Buckminster Fuller's designs.

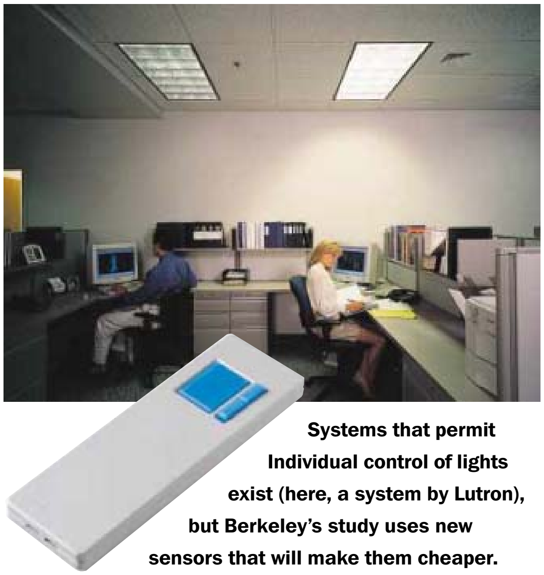
The Georgia Tech organic solar cell consists of a glass plate, layers of indium oxide, pentacene, C60, and bathocuproine, and an aluminum electrode. According to lead researcher Bernard Kippelen, a professor of electrical and computer engineering at the university, it can be produced inexpensively and poses no environmental problems throughout its lifecycle.

For designers and builders, the cell's benefits would include lower transportation costs and easier handling and installation, according to Kippelen. Layered on substrates as thin as a few microns, the cells would conform easily to most roof and wall shapes.

Organic semiconductors, however, are sensitive to moisture and oxygen, and a highly flexible plastic substrate will be needed to provide a sufficient barrier, he added. But while durability is a question mark—they're unlikely to match the 20-to-30-year life span of silicon-based PV cells—the light weight and low cost of the cells would make frequent replacement feasible. "If you just have to peel them off and put new ones on, it could make sense to change the cells as often as every two years, especially if you can make them by the mile, printing roll to roll," Kippelin said.

The researchers' cell has a power conversion efficiency of 3.6 percent, slightly better than the 3.5 percent achieved by most existing organic cells.They expect to raise that to 5 percent soon, said Kippelen, who added that 10 percent efficiency can be achieved within the next few years. Typical silicon PV cells are about 10 to 15 percent efficient, with some high-end cells achieving closer to 30 percent efficiency. Kippelen stressed that a lot of research stands between this early work on organic cells and their widespread use. "Organic materials for semiconducting have only been around for about 10 years," he said. "The science of these materials is not as advanced as for silicon. It's difficult to predict what the upper efficiencies are going to be."

Small versions of the Georgia Tech researchers' cell—on the order of a square centimeter—could provide power to distributed building sensors or radio frequency identification (RFID) tags within a couple of years. Larger solar panels or rolls of sheeting might be 5 to 10 years away, according to Keppelen.



Systems that permit Individual control of lights exist (here, a system by Lutron), but Berkeley's study uses new sensors that will make them cheaper.

Environmentally, making organic PV cells poses no significant problems compared to some of the more advanced thin-film solar cells that use harsh chemicals containing cadmium, copper, and arsenic, said Keppelen. "During the manufacture of these cells, people are exposed to nasty chemicals and the process generates toxic waste," he said. "The materials we're using are carbon-based and fairly harmless. Photovoltaic technology should be environmentally friendly," he said. *T.S.B.*

Researchers are developing new types of solar cells, including those made from organic chemicals and others using "quantum dots," which harvest more sunlight than today's cells.

In lighting, a little intelligence goes a long way

Up to half the electricity used in commercial buildings is consumed by lighting, but control schemes that match lighting use to actual demand can significantly cut that figure. A wireless lighting control system under development at the University of California at Berkeley puts sensors and switches where the action is, on the theory that letting users, building managers, and even utility companies control the lights makes for greater efficiency.

The Berkeley researchers have assembled a prototype system of programmable wireless switches, each of which can control many individual light fixtures. The scheme uses wireless sensors developed at Berkeley that together form a "mesh network" of distributed switches. The fixtures controlled by such a network can be operated manually or automatically, in response to conditions in the immediate surroundings, predetermined schedules, or triggers like signals from utility companies. The scheme doesn't rely on a single existing control protocol, such as the Digital Addressable Lighting Interface (DALI) or Building Automation Control network (BACnet), but is intended to be compatible with existing and new lighting equipment, according to the researchers.

In spring 2004, a test of the Berkeley system in which users were given control of the lighting in their workspaces yielded a 40 percent drop in lighting energy use. The pilot installation was a small office with eight workstations and eight fixtures controlled by a pair of switches. "Our starting point is providing local control to occupants," said Charlie Huizenga, a Berkeley research specialist and lecturer.

The test results highlight the inefficiencies of inflexible central control schemes for lighting, especially for open-plan offices. "One person near a window kept his light off because his space was nicely daylit. Another person kept the lights off when using her computer, but turned them on when reading and doing other paper-based tasks. Another person worked half-time, and was able to turn the light on and off as he came and went," Huizenga said. A similar but larger-scale test program, involving roughly 40 controlled lights, is slated for this summer.

Because it doesn't require rewiring, the low-cost wireless system developed for this study makes it more feasible to retrofit existing buildings with the technology. And the mesh network also makes it easier to provide precise lighting control in new buildings, says Huizenga. Drawing on sensor research conducted at Berkeley, the control scheme taps a variety of power sources. Where relay devices are part of light fixtures, they can draw regular A/C power, but remote switches and motion sensors can run on batteries. Huizenga said, "We are looking at powering them using solar cells, or scavenged vibrational energy." Other researchers have developed push-button switches powered by piezoelectric elements (typically crystals that produce a voltage when they're under compression or tension, or that cause compression or expansion when a voltage is applied).

Controlling the disparate parts of such schemes—by integrating motion sensing, daylight sensing, remote switches, and central switches—is a complex and expensive undertaking, which is why so few buildings use advanced lighting-control systems. But Berkeley researchers believe electricity prices will rise in the next several years, creating an incentive to owners and operators to adopt such measures to slash costs. The cost of mesh networks like the one studied here will also likely drop as the technologies are refined. Unlike earlier systems, the devices in Berkeley's scheme can be installed in a matter of minutes, Huizenga noted. "Maintenance is also an important issue for affordability—the controllers will need to last 15 to 20 years, at least as long as a ballast," he said. Components like those used in the Berkeley study will be on the market within a year or so, he predicts.

The study's results are "very encouraging, and say a lot about how much commercial space is overlit in the U.S. and perhaps elsewhere," said Stephen Conners, director of MIT's analysis group for regional electricity alternatives. Ideally, he added, a wireless system's

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interface will allow lights to be controlled individually or in groups—but does that mean that pranksters could hijack and change your lights, à la television's *The Office*? Typical security measures like password-protection systems would eliminate this concern, Conners says. *T.S.B.*

New study may boost an old energy-saving technique for HVAC

In many buildings across the U.S., outdoor air is pulled in throughout the day at rates designed to satisfy ventilation requirements for maximum-occupancy conditions, even during times when there are few people in the building (think schools at night or restaurants between lunch and dinner). But a recent study conducted at Purdue University in Indiana has given a shot in the arm to an old strategy for managing energy waste.

PURDUE STUDY: MODELING OF DCV IMPLEMENTATION

TEST LOCATION	PAYBACK PERIOD (YEARS) OFFICE	RESTAURANT	RETAIL STORE	SCHOOL
OAKLAND, CALIFORNIA	6.8	2.1	1.0	4.0
EL CENTRO, CALIFORNIA	1.9	0.6	0.3	0.9
PHOENIX, ARIZONA	3.4	0.9	0.6	1.5
CHARLESTON, SOUTH CAROLINA	1.1	0.7	0.4	0.9
FARGO, NORTH DAKOTA	1.5	0.3	0.2	0.5

SOURCE: PLATTS/ADAPTED FROM JIM BRAUN, ET AL

For more than a decade, waste from HVAC systems that condition spaces with variable occupancy has been addressed through demand-controlled ventilation (DCV), a strategy that links the amount of outside air drawn in for ventilation to the actual occupancy of the building at any given time, via a network of sensors that use airborne carbon dioxide concentration as a proxy for occupancy levels. DCV has been shown to produce annual energy savings of up to $1 per square foot. Up until now, the high expense and frequent maintenance required for DCV equipment limited the application of this strategy.

But the technology has improved lately. A decade ago, sensors used in DCV systems ranged in cost from $500 to $800 each; now many newer devices cost $200 or less. In addition, some of them remain accurate for 10 to 15 years, substantially reducing the cost of the yearly calibrations that were required for older sensors. Also, many rooftop air conditioners, frequently used in commercial and institutional buildings, come equipped to accommodate sensor inputs, which reduces the amount of labor needed to implement DCV.

The Purdue study, conducted in 2003 and 2004, highlights these recent improvements in DCV technology and points out new opportunities for energy savings. Jim Braun, professor of mechanical engineering at Purdue University, and his colleague Kevin Mercer, modeled four types of buildings—a restaurant, a retail store, a school, and an office—in two cities in California and three cities outside the state (see table, above). The cities were selected to represent a range of climates for the study, and the modeled buildings varied in size from 5,250 square feet for the restaurant to 80,000 square feet for the retail store. The study compared traditionally operated HVAC systems to those using DCV.

The restaurants and retail stores showed the most potential for savings with DCV, with savings estimated at around 50 percent of the total energy operating cost for HVAC in some cities. Across all the cities and buildings, payback periods ranged from 0.2 to 6.8 years, although 16 of the 20 modeled scenarios yielded a payback of fewer than two years, and 12 yielded a payback of one year or less (see table). The modeling used more conservative numbers for design occupancy than those set forth in the relevant ASHRAE standard for all but office buildings—so it's likely that payback periods would be even shorter than what the study predicts.

Improvements and price drops in the technologies used for demand-controlled ventilation (DCV) make the strategy more feasible for a wide variety of building types.

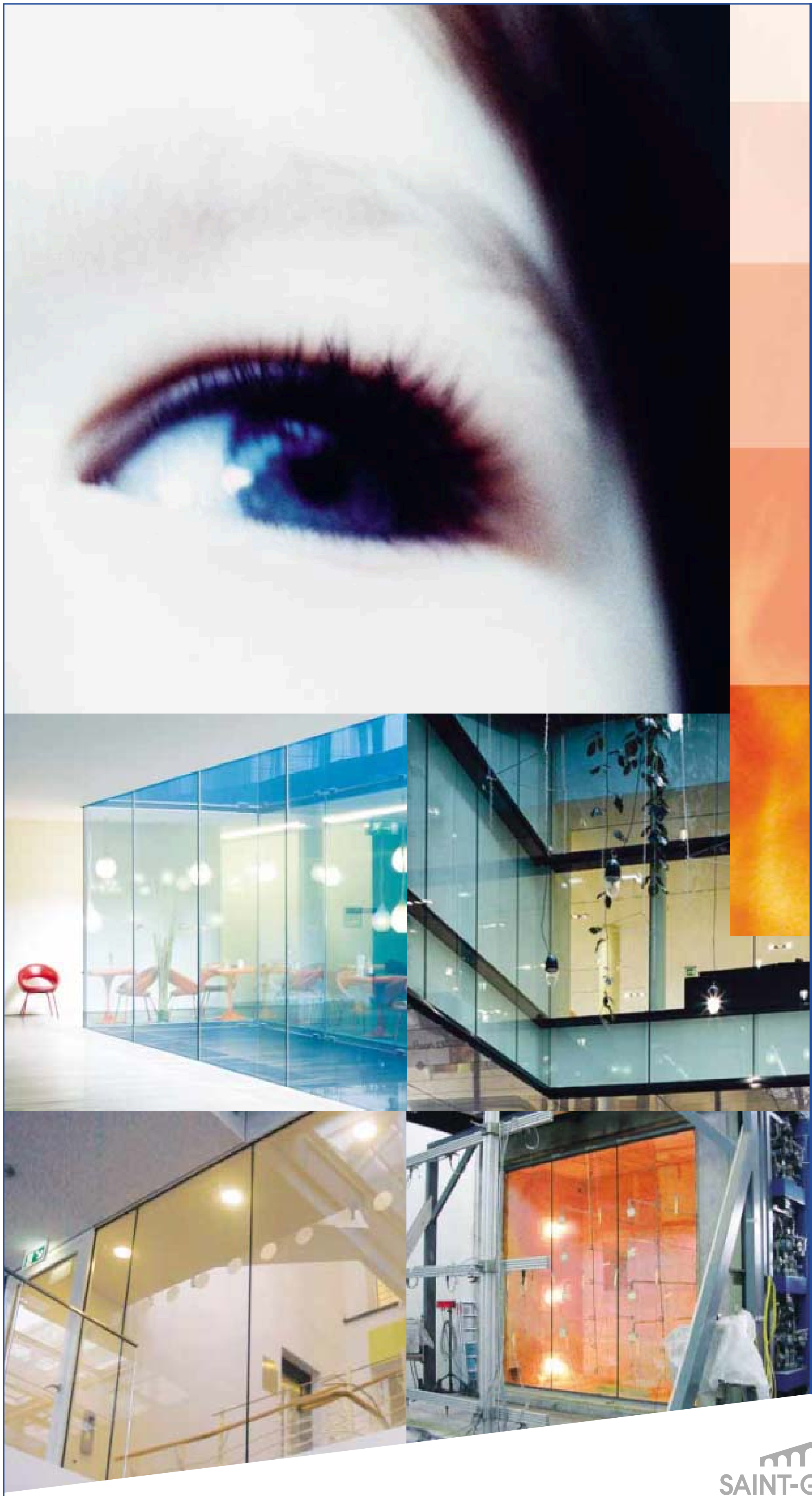
ZONE Controller
Carrier

DCV uses carbon dioxide monitors and special controls to estimate occupancy and adjust air intake. A study at Purdue concludes that DCV would be financially feasible for several types of buildings.

PHOTOGRAPHY: COURTESY CARRIER CORPORATION

Along with improvements in the DCV hardware itself, new online software tools, available through the Web sites of HVAC manufacturers, make it easier for design teams to determine where DCV can be used. The tools include Carrier's "Hourly Analysis Program" (www.carrier.com), Honeywell's "Savings Estimator" (www.honeywell.com), and AirTest's "CO_2 Ventilation Control and Energy Analysis" (www.airtest.com). Each allows users to enter information about a project, such as building type, size, and location. The software takes this information and provides users an analysis of the potential cost-effectiveness of a DCV system—which helps reduce the risk and uncertainty of moving forward with this strategy.

"Our hope is that this research will increase the usage of this effective energy-saving strategy," said Jim Braun. His hopes have already been realized: Two utility companies, in California and Connecticut, are now using the Purdue study to build programs that will help their customers identify opportunities to implement DCV. In the not-too-distant future, all HVAC systems may be smart enough to know when a building's empty enough to call it quits. *Peter Criscione*



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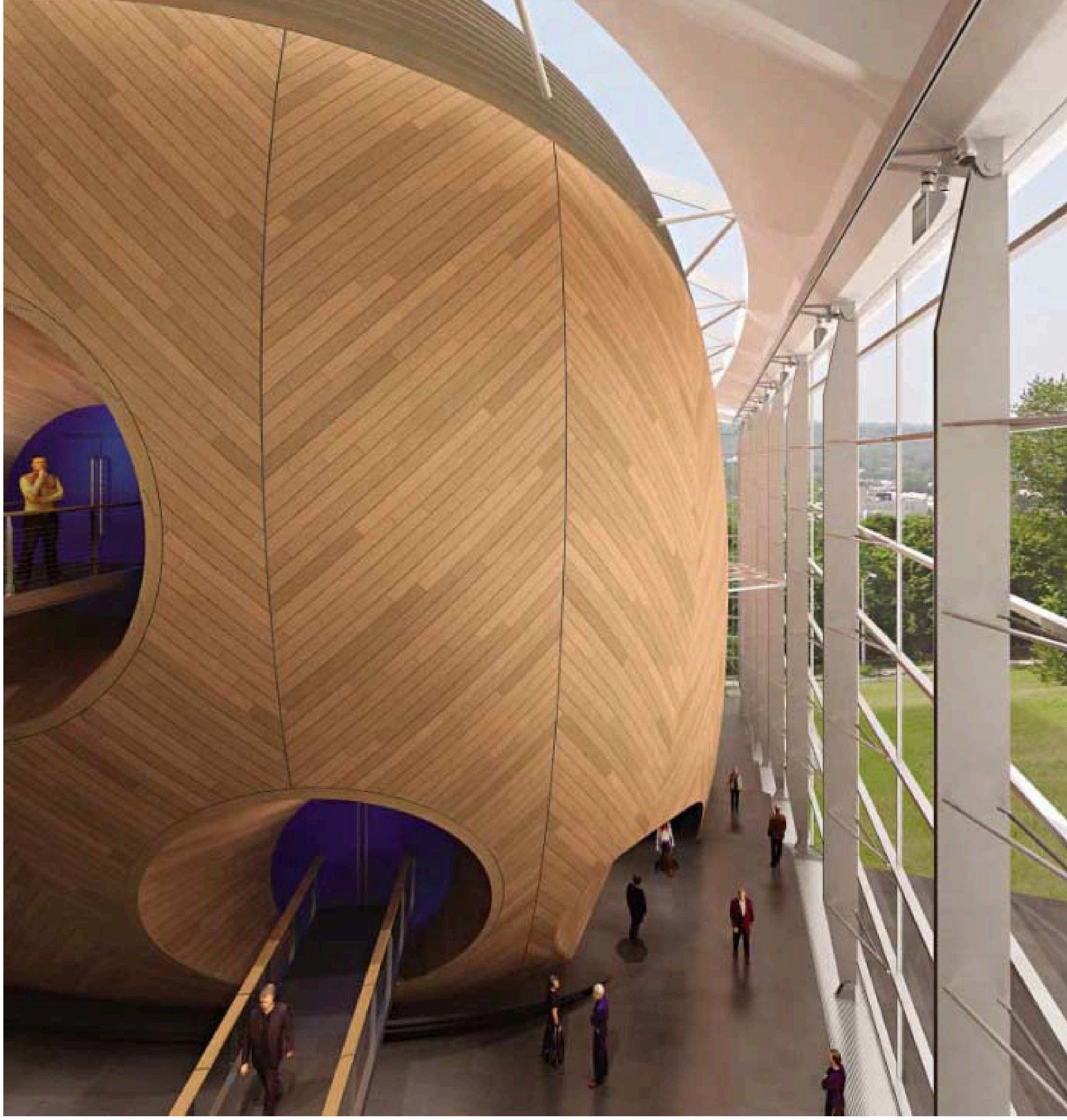


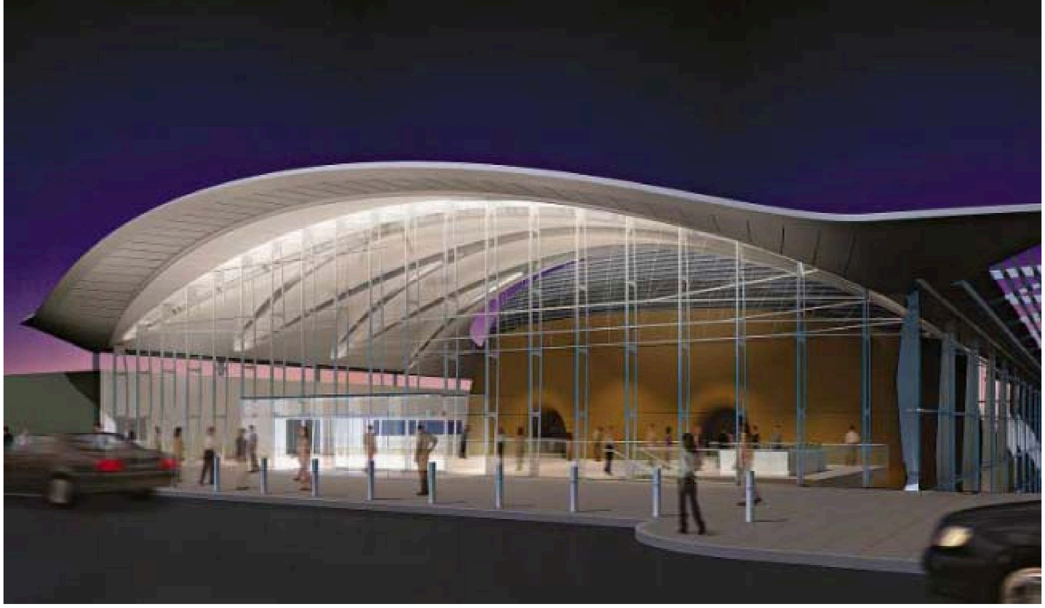
EMPAC will be nestled into a hillside site at RPI (below). For ease of production and assembly, the concert hall's "hull" (right) is divided into 12 sections, and the cedar planks arranged in a herringbone-like pattern; about a quarter of the planks will be milled with CNC machinery. The audience will enter via six conical portals in the hull.

Experimental Media and Performing Arts Center (EMPAC), Troy, New York

IMAGES: COURTESY GRIMSHAW

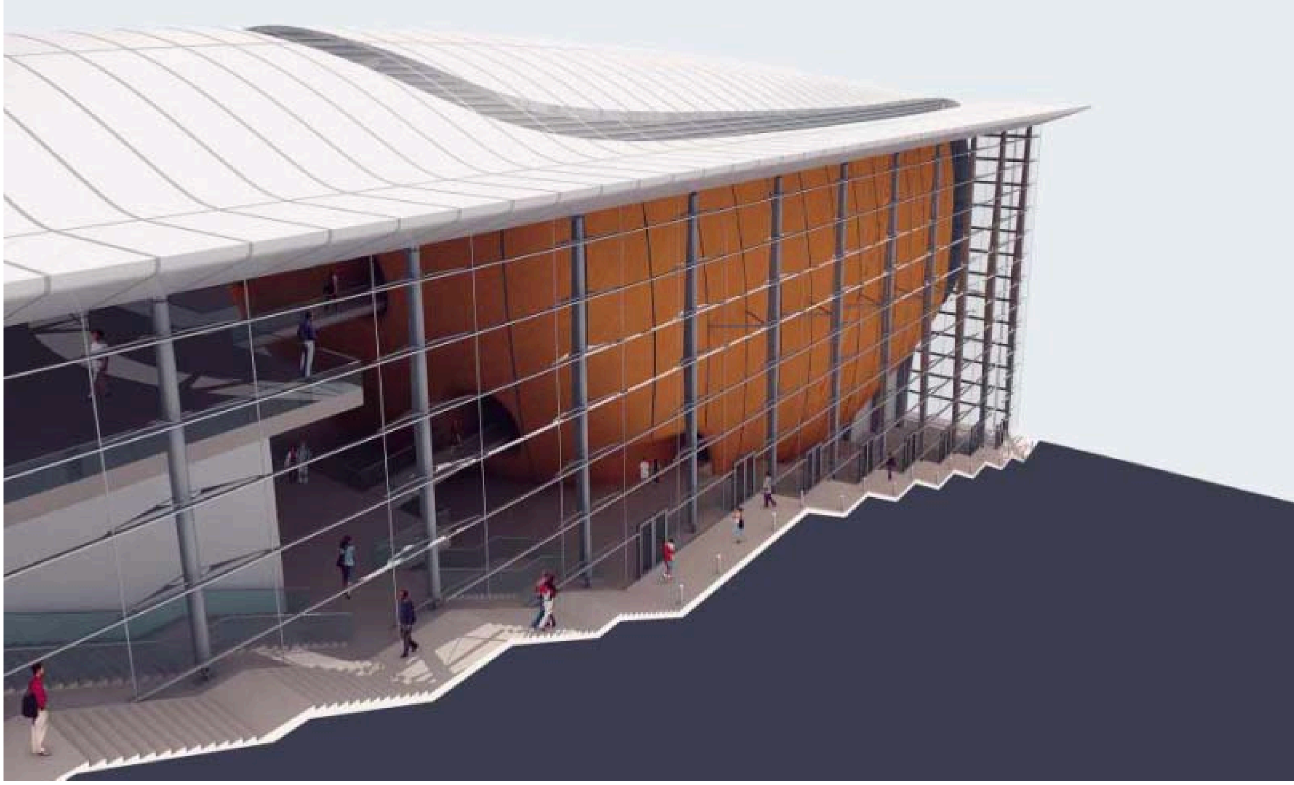
By Deborah Snoonian, P.E.

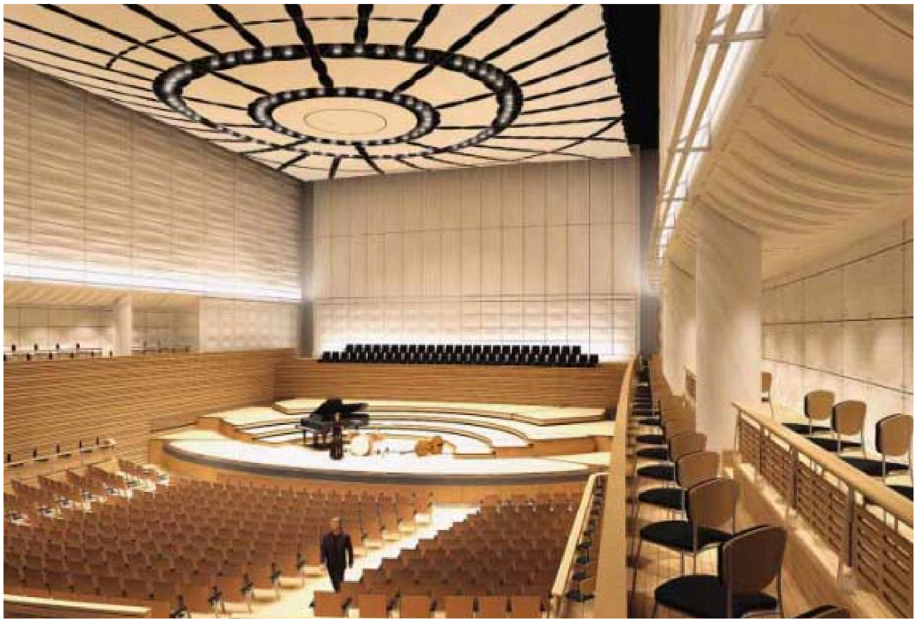
Rensselaer Polytechnic Institute's new arts center aims as high in design, materials, and systems as it does in program. Rising at the edge of the university's campus is the ambitious Experimental Media and Performing Arts Center (EMPAC), which will house traditional performance spaces for music, dance, and theater; high-tech galleries for experimental and digital arts; and professional-grade studios for audio and video production. Designed by Grimshaw Architects (with David Brody Bond as architects of record), the glass-enclosed, 203,000-square-foot structure features a hot-water heating system integrated into the mullions of the north curtain wall to mitigate the frigid drafts of upstate New York winters. Its 1,200-seat concert hall will be enclosed in a shiplike hull made of cedar planks; the audience will feel like they're sitting inside a violin. Acoustical consultants Kierkegaard Associates tested 50 different fabrics for the concert hall's hung ceiling before settling on Nomex, a canvaslike flame-retardant fabric more often used to make jumpsuits worn by NASCAR drivers. Slated to open its doors in 2007, EMPAC may just turn the modest town of Troy, New York, into an avant-garde arts mecca.



The skylight, visible from the east entry (left), will be made from ETFE, an advanced material that's related to Teflon. It weighs only 1 percent of the equivalent area of insulated glass, which allows the skylight to span long distances with few mullions. The skylight would cost four times as much if it were designed in glass.

German curtain-wall manufacturer Gartner proposed a facade-integrated heating system using hot water pumped through the mullions of the north curtain wall (right), the first large-scale application of this technology in the U.S. Engineers Buro Happold worked with Gartner to devise a proper zoning configuration for the system.





Panels of Nomex (top in image at left), an acoustical fabric, will be rigged like sails to steel posts installed in the concrete ceiling of the concert hall. Nomex reflects high-frequency sounds but allows low-frequency sounds to travel straight through and reverberate against the ceiling above. The walls of the hall will be made of cast stone.

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Tech Briefs

Baton Rouge's new arts complex sports a shimmering facade • In Beijing, warped surfaces befit a new planetarium • Templates for hospital design speed construction in California

BYTES

The American Society for Testing and Materials (ASTM) recently replaced eight standards for gypsum product specifications with a single standard, ASTM C 1396, which applies to many gypsum products used in construction. No technical modifications were made with this change. The new standard will be phased in over a five-year period.

The Turkish Building and Information Center recently established an online museum at www.archmuseum.org as a first step toward building a planned but long-delayed Turkish Museum of Architecture. The Web site contains photos, biographies, and documents highlighting the contributions of Turkish architecture to global practice.

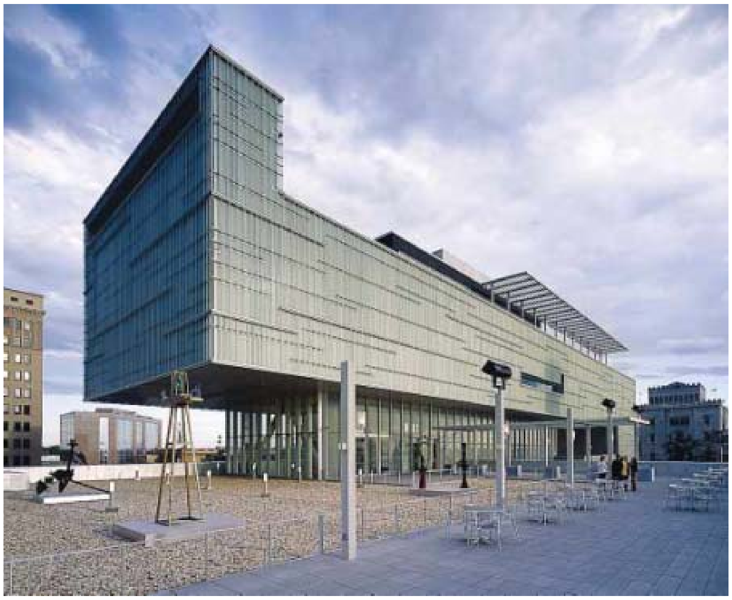
A recent study at Cornell University found that workers in chilly offices (below 70°F) worked slower and made more typing errors than those working in warmer offices. To analyze the results, researcher Alan Hedge developed software that synchronized indoor temperature with productivity.

Researchers at Brookhaven National Laboratory, in Long Island, New York, recently pioneered a small-scale machine that recreates the high pressures and low temperatures found on the sea floor. It will enable scientists to study how to harvest the vast quantities of frozen natural gas that reside there.

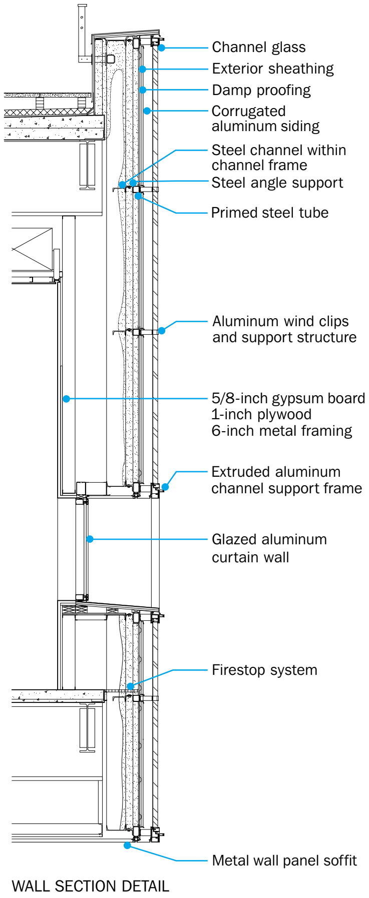
Scientists at the Jet Propulsion Laboratory have discovered that huge ocean waves create a humming sound in the earth that can be detected with highly sensitive seismometers. The breakthrough may one day allow researchers to predict when and where earthquakes may occur.

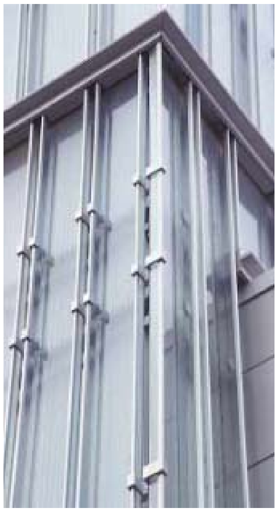
PHOTOGRAPHY: © TIMOTHY HURSLEY (TOP); COURTESY SCHWARTZ/SILVER (BOTTOM, INSET)

Channel glass and reflective aluminum brighten the Shaw Center



At the Shaw Center, the facade's glass channels (above) vary in size and shape to create depth and complexity. They also act as a rain screen.





Steel wind clips and staggered shelves hold the glass channels in place (above), and a layer of shiny aluminum siding sits behind the glass.

The intricate surface of the new Shaw Center for the Arts in Baton Rouge (see project story, page 86) are no accident—the architects chose materials and lighting to achieve an iconic look.

In developing the facade, the Boston-based design firm Schwartz/Silver Architects, along with associate architect Eskew+Dumez+Ripple, had several goals in mind: to make the building stand out like a beacon; to emulate the shimmering surface of the nearby Mississippi River; to break up the monumental quality of two building types—theater and art museum—that typically use few windows; and to protect the complex from Louisiana's rainy climate.

The design team initially planned to clad the building in copper, which they saw as a unique (not to mention shiny) option. But they later convinced their client to invest $2 million more in a facade that layers channel glass over corrugated aluminum coated with highly reflective metallic paint. The system would provide aesthetic intricacy and glow "like a Chinese lantern," the team said.

To break up the massing of the huge building and lend its surface depth and complexity, the architects conceived a staggered pattern of glass channels of various widths and lengths. Top and bottom supporting shelves also vary in length. These shelves, as well as wind clips, are connected via steel lattices to the building's structural-steel frame.

The glass channels are mounted 2 inches apart, and the aluminum siding sits 6 inches behind them to make cleaning easier and for pressure equalization. Since they act as a rain screen, the channels were tested with a full-scale mock-up, using equipment that simulated hurricane-force winds of 110 miles per hour. Vertical wire glass and aluminum phalanges hold the channels in place, ensuring they won't fall off the facade if they break.

To illuminate the building, the team considered using fluorescent or LED-based light pipes, or incandescent lights integrated into the facade. Both strategies fell by the wayside because they created too much glare and also raised difficult budgetary and maintenance issues. The building is instead lit from eight separate exterior locations, and at night, the lights reflect back and forth off the painted aluminum and glass curtain wall, creating an ethereal, haunting effect.

All are happy with the result. "It was a no-brainer," says Schwartz/Silver partner Chris Ingersoll, AIA, of the switch to glass. "It was vastly superior for creating visual interest." *Sam Lubell*

A planetarium's curves hint at the mysteries of the cosmos

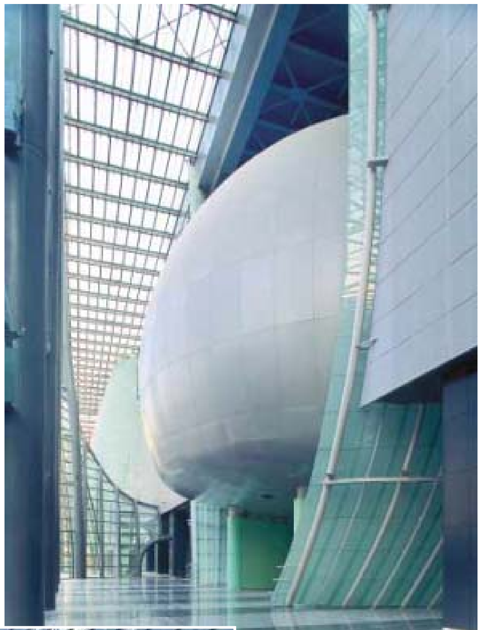
Beijing's adventurous new planetarium stands out in a country still adjusting to the idea of Western architectural Modernism. With its compound-curved glass walls and variety of high-tech display spaces, the building projects the progressive, modern image that Beijing hopes to buff when it takes center stage during the 2008 Olympics.

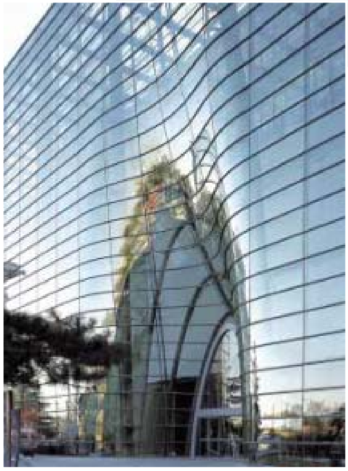
It was those forward-looking qualities that Beijing's mayor demanded when he rejected the four submissions he received in an invited competition for the planetarium. One team, impressively called the China Space, Civil, Building, Engineering, Design & Research Institute, invited architect Nonchi Wang to help them amend their entry. Rather than revise it, he boldly designed a new building from scratch in 14 days—and snared the commission.

At once didactic and allusive, the planetarium incorporates forms that represent essential concepts in physics and cosmology, like relativity, warped space, and string theory. The 210,000-square-foot building is an extended rectangle with a long, north-facing glass wall, with gray granite cladding its other three sides. Within it, three deformed spheres "signify the fundamental particles of quantum mechanics in dynamic states," says Wang. They house a 240-seat digital-projection planetarium (the only one outside of New York), a 48-seat theater equipped with motion simulators, and a "4D" theater featuring 360-degree image projection. Five undulating vertical tubular forms, meant to evoke string theory, contain elevators and stairwells and wrap the planetarium and 4D theater.

To represent the warps and curves of outer space, Wang designed the glass curtain wall with bulges and depressions, marking the entrances with distinctive saddle-shaped curves depicting half of a "wormhole," the term for a "shortcut" in Einstein's space-time continuum. (Wang is careful to call his design an analogy, since these phenomena resist direct or literal representation.) He built virtual models of the building using RHINO software, which also enabled their manufacture.

The double-curved glass walls were of two types, one more complex than the other. Inside, the tubular "strings" are detailed like shingles, with each course of glass slightly overlapping the one below. But the external curtain walls had to be





The shapes of the display spaces (above) were inspired by the phenomena of physics. The curved glass panes and frames for the curtain wall (left) were manufactured simultaneously in China.

PHOTOGRAPHY: © FU XING (TOP); ZHANG GUANG YUAN (BOTTOM)

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weathertight and double-glazed for thermal insulation, and thus the glass was designed to fit into metal T-bar frames with gasketing. In the curved segments, each frame and pane (approximately 3 feet by 10 feet in size) has a unique shape. To complicate matters further, a tight schedule dictated that the glass and frames be fabricated simultaneously, rather than by the usual method of building the frames first and then cutting the glass to fit. It was the first time anything like this had been tried in Asia, and Wang calls it "a new benchmark for China."

Appropriately, Wang bridges the worlds of East and West. He's a Taiwanese native who earned his first architectural degree in that country and his second one at Yale; his small firm, Amphibian Arc, is based in Los Angeles. So far, he's shown an uncanny affinity for public projects related to science, with the Shangyang Science Museum and the Beijing Planetarium under his belt, and soon, a monument to Copernicus to be built in Poland. *John Pastier*

For one hospital owner, familiarity in design breeds success

Hospitals strive to personalize patient care, but complex regulations and codes make unique health-care architecture a serious challenge. Recently, one large hospital chain began addressing this problem by taking a cookie-cutter approach to the manner in which its facilities are designed.

Kaiser Permanente (KP), the largest health-care provider in California, is using design templates created with the help of two San Francisco architecture firms to build three new hospitals now under construction. With only slight variations due to local demographics and regulations, the trio will be essentially the same inside and out. Eventually, these templates will guide construction or renovations of 20 KP health-care facilities by 2013, says Christine Malcolm, KP's senior vice president for hospital strategy. The Oakland-based company hopes template designs will mean faster approvals, fewer change orders, and improved patient care.

IMAGE: COURTESY CHONG/SMITHGROUP

KP isn't the only health-care organization thinking along these lines. "Templates can potentially create an environment that's safer, because the designs standardize the way care is being delivered," says Brett A. Esrock, executive vice president and chief operating officer at SSM St. Joseph Hospital in Kirkwood, Missouri, which recently brought together KP officials and dozens of other design and health-care experts for a brainstorming session for a new St. Louis hospital in its early planning stages.

Chong Partners Architecture and SmithGroup formed Chong/SmithGroup to guide the KP project. The architects participated in the template development process with contractors, KP staff, and more than 600 clinicians and other health-care professionals.

Voluminous state building regulations, many tied to earthquake safety, spurred this strategy. "In California, it usually takes over six years to open a hospital," says John Kouletsis, AIA, KP's national director of planning and design services. "Up to two years of that time is spent in the regulatory process."

The template designs have already saved time. In May, builders completed the steel frames for two of KP's new hospitals, only 30 months into the building effort. "We're at least a year, maybe 18 months, further along than usual," says Carl Christiansen, AIA, vice president with SmithGroup. KP believes templates will also codify best practices it has documented relating to room design and the placement of clinical equipment for efficient access by doctors and nurses.

The templates detail hospitals ranging in size from four to six floors. Each facility sports a circular, two-story lobby and two primary nursing units featuring punched windows. A diagnostic and treatment wing sits in the rear of the building. Glass walls allow natural light to brighten the cafeteria, waiting space, and circulation spine. "We pushed to make the building feel as light as possible by using as much glazing as we could," says Carl Hampson, AIA, an associate with SmithGroup.

As the remaining hospitals go up, KP envisions only minor changes to the templates, based on improvements or corrections revealed during construction of the first facilities. Still, each hospital will be unique in its siting and specific medical program, says SmithGroup's Hampson. ***Alan Joch***

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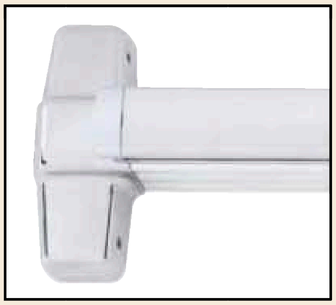

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Tech Products

Design tools, presentation devices, and more

By Deborah Snoonian, P.E.

Revit Building 8
Autodesk
www.autodesk.com
Windows only

Targeted for architectural users, the release of Building 8 marks Autodesk's shift toward segmenting its flagship 3D design software along disciplinary lines. (Revit Structure will make its debut later this year; Revit Mechanical is in the beta-testing stage.) New features in Building 8 include built-in interference checking, improvements in editing families of components like doors or windows, and a simplified method to publish directly to Buzzsaw, Autodesk's online collaboration tool. The software can produce DWG files for those needing to share information in AutoCAD's popular file format, and 3D solids created in Autodesk's ADT or Building Systems can be imported or linked into Building 8 for checking interferences or other tasks.

Blender
Blender 3D
www.blender3d.com
Window, Mac, and others

This product for 3D modeling, animation, rendering, and post-production was killed off by its parent company after the dot-com crash in 2001 but resurrected when one of its original creators formed a nonprofit foundation to continue its development. Blender is a free (yes, free), community-based, open-source software program that works on multiple operating systems to help designers create 3D content for presentations, Web sites, and other media. Though it lacks the robustness needed to model buildings geometrically, smaller practitioners and firms on tight budgets will find it useful for a variety of everyday visualization tasks.

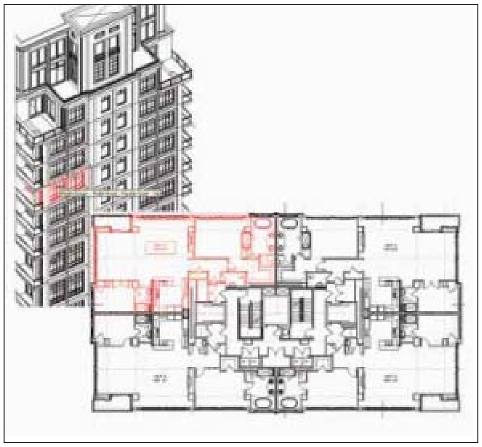
SpacePilot
3D Connexion
www.3dconnexion.com
Windows only

This input device promises to reduce the number of keyboard and mouse commands needed to produce drawings, visualizations, and other design documents. It features adaptive sensing technology and an array of keys that can be customized, allowing designers to save their finger strength for Luddite hobbies like guitar playing or knitting.

PowerCAD CE
GiveMePower
www.givemepower.com
Windows only

PowerCAD is an AutoCAD-compatible program for mobile and wireless devices like cell phones, handheld organizers, and tablet PCs. The latest release features one-button e-mailing, DWF file exporting, and enhanced support for connecting with Bluetooth-equipped wireless devices. It also allows users to add voice notes to drawings, a helpful feature, since viewing them on small screens is so hard on the eyes.

For more information on technology for architects, including reviews, vendor lists, and links, go to Architectural Technology at **www.architecturalrecord.com**.



Revit Building 8, geared toward architects, is the first in a series of Revit releases that will be tailored for different AEC professionals, such as structural and mechanical engineers.

You can make renderings for free with Blender, available at www.blender3d.com.

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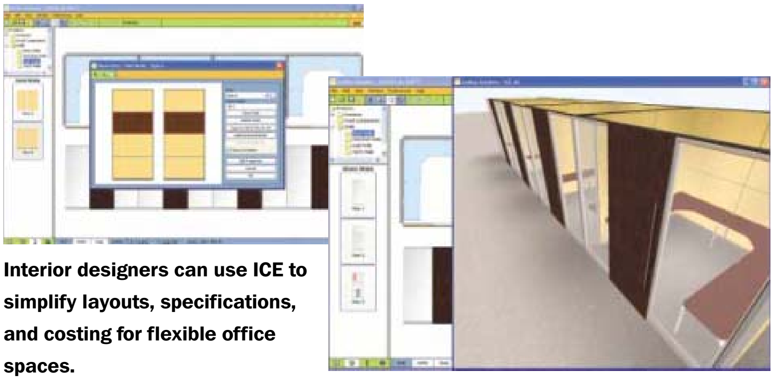
IMAGES: COURTESY AUTODESK (TOP); BLENDER/BRENT PEEPLES (MIDDLE LEFT); 3D CONNEXION (MIDDLE RIGHT); GIVEMEPOWER (BOTTOM)

Tech Products



Interior designers can use ICE to simplify layouts, specifications, and costing for flexible office spaces.

The PowerLite S3 has different viewing modes for still photos, animations, and video, as well an integrated speaker for broadcasting music or sounds.

ICE

Dirtt Environmental Solutions
www.dirtt.net
Windows only

Despite the rather unfortunate name of the company that makes it, ICE helps interior designers chill out about arranging modular workspaces. This Java-based program, which can be used on its own or as a plug-in to Autodesk or Bentley products, enables designers to explore and compare different layout concepts (e.g., linear or clustered arrangements of cubicles) using a library of interior components from manufacturers who subscribe to ICE's service. Here's the best part—the software automatically generates specifications and a cost estimate based on each layout that's explored, obviating the need for error-prone manual calculations and revisions.

PowerLite S3

Epson
www.epson.com
Windows and Mac

With a price under $1,000, this multimedia projector is a budget-friendly option for solo practitioners and small design firms who need a way to present still and moving pictures. The S3 has various settings for viewing photographs, videos, or even sports films to help make images crisp and clear. An internal speaker lets sound come through, and a port for plugging in a computer monitor allows a presenter to see images on-screen while facing the audience. Users can personalize the S3 with start-up graphics and assign security codes to keep unauthorized users from tapping in.

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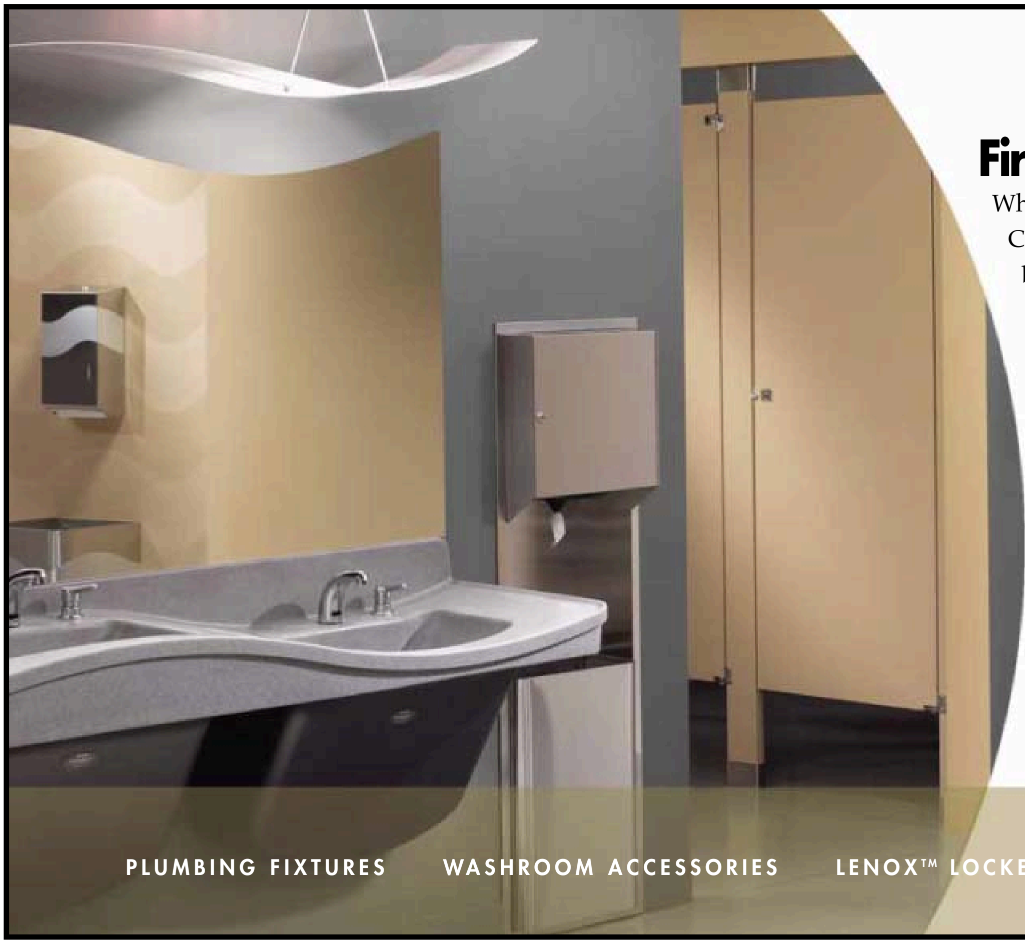

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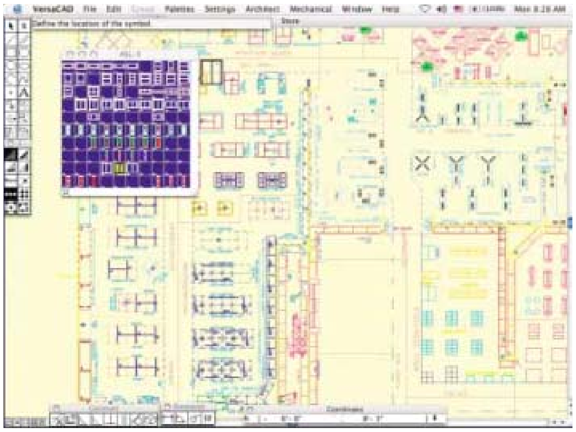

Archway Systems has released a version of VersaCAD specifically for Mac users running OS version 10.3 or later.

IMAGES: COURTESY VERSALASER (LEFT); ARCHWAY SYSTEMS (RIGHT)

VersaLaser VL-200
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www.versalaser.com
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Cutting model parts by hand is so 20th century. Leap into the digital age with the VersaLaser VL-200, which uses a computer-controlled laser beam to cut, score, and contour sheets of paper, plastic, wood, fabric, and other materials into any shape you desire. The printer can accept files from many popular drafting and graphics programs, including AutoCAD, Photoshop, and CorelDRAW. Retailing for around $8,000 or leasing for under $200 per month, the VL-200 is less costly than 3D printers used for model making—and while it's still not the cheapest piece of office equipment you'll ever buy, just think of what you'll save in X-Acto knives.

VersaCAD for Macintosh
Archway Systems
www.versacad.com
Macintosh only

VersaCAD has been available for Macs and Windows-based computers for several years, but the developers launched a new version a few months ago designed to run on Macs using OS version 10.3 or later. The software takes advantage of the Mac's graphical interface and offers users the ability to import files created in AutoCAD and other programs. Other features include an extensive library of symbols and a special pulldown menu for architectural drawings, with functions handy for creating doors and windows. With a retail price of under $700 per seat, it's a modestly priced addition to the even more modest number of CAD products available for Macs.

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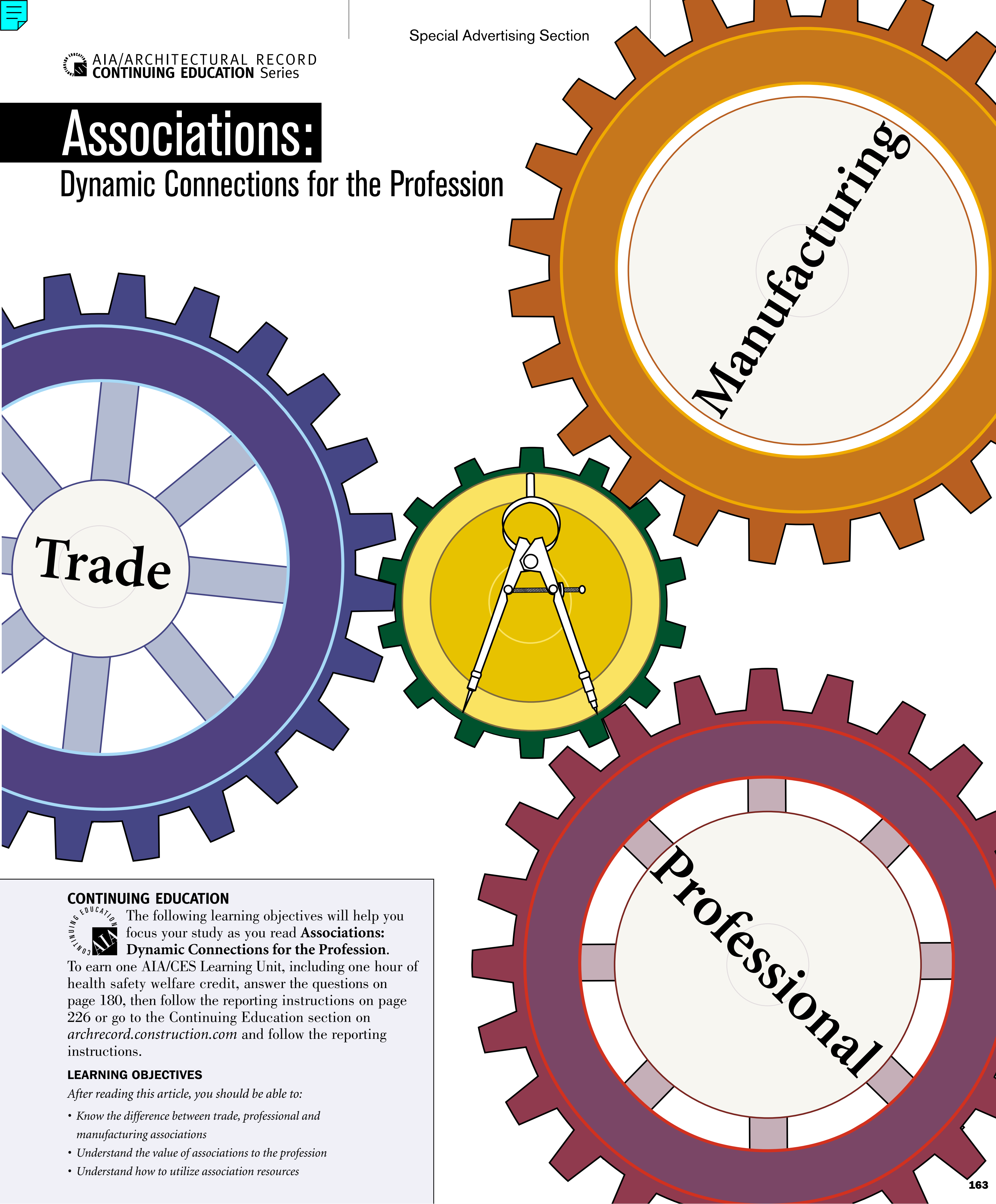

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LEARNING OBJECTIVES

After reading this article, you should be able to:

- *Know the difference between trade, professional and manufacturing associations*
- *Understand the value of associations to the profession*
- *Understand how to utilize association resources*

How do associations serve the profession?

"A multitude, from whatever cause assembled, seldom remains long silent." Those words, credited to famed Scottish poet Sir Walter Scott, never were so true as when we speak about associations. Licensing, standardized metrics, historic preservation, fair wages, safety principles and an overall respect for the design and construction profession are just a few things we can thank associations for championing.

Advocates of the occupations they serve, associations offer an opportunity for members to exchange ideas – an exchange that ultimately results in higher standards of professionalism that are continually being established, met and advanced. The design and construction industry has more than 100 national associations, not counting regional and local groups. These are the industry's preeminent promoters of research, best practices, product information, and continuing education, and are frequently one of the top resources for career and job opportunities. Often, these associations provide all this for free or for a nominal fee to the public on their Web sites, which have become a primary form of communications among associations.

The terminology used to describe associations often generates much confusion – among association staff, members and the general public. There are three basic types of associations: trade, professional and manufacturing. While they have many of the same goals of building the profession, which is leading to a growing overlap in membership, there are differences. This article will explore overall association characteristics, discuss their value through industry examples, and provide you with a roadmap on how to best use their resources.

According to the Washington, D.C.-based American Society of Association Executives, 95 percent of associations offer education programs for members, making that service the single most common association function. This is followed at 89 percent by convention planning activities. Using Web sites and email to share information with members came in at 81 percent, while public information activities at 79 percent.

Americans active in associations devote more than 173 million volunteer hours each year, with a time value of more than $2 billion.

Associations are valued so highly in the United States, that they are given favored tax status with both state and federal governments. Associations are generally organized and operated as both nonprofit and tax-exempt entities. Nonprofit status refers to incorporation status under state law; tax-exempt status refers to federal income tax exemption under the Internal Revenue Code. This does not mean that associations cannot earn profits or that they do not pay taxes. Although largely tax exempt, associations still pay more than $1.1 billion annually in local, state and federal taxes.

Even though they are nonprofit organizations, associations are permitted to generate income and still retain their nonprofit status. As nonprofit organizations, what associations are barred from doing is distributing their profits to individuals who control the organizations. Associations with a nonprofit status have elected to undertake programs to benefit members and the public rather than private individuals. By law, their profits must be dedicated to furthering the purposes for which they were organized. All earnings must be "reinvested" in the organization.

What does tax exemption mean? Tax-exempt status means that an organization is exempt from paying federal corporate income tax on income generated from activities tied to the purposes for which the organization was formed. The association must pay federal corporate income tax on income that is not related to its purposes. They also must pay a variety of other taxes, such as payroll and real estate taxes.

Why all this talk about taxes? Think about it. How many organizations within the United States are given such freedom to use their funds to passionately promote their cause and educate the public? Apart from educational institutions, associations are the foremost way to become skilled on a subject. And in a profession like architecture, oftentimes the best lessons are learned outside of school, from those people practicing and furthering the profession every day in trade, professional and manufacturing associations.

Each of these association types use similar communication techniques, such as annual meetings, Web sites, local chapters, annual shows and varied publications that must be explored on an individual association level.

Trade associations

A trade association is defined as an organization of business competitors, in a specific industry or business, that is interested primarily in the commercial promotion of products or services. Membership is usually held in the name of a business entity. The association's services may include business ethics, management practices, standardization, commercial (i.e., statistical) research, publication, promotion, and public relations. The basic tenet of many trade associations in the design and construction field, such as the National Electrical Contractors Association and the International Brotherhood of Electrical Workers (NECA-IBEW); the Westlake, Ohio-based Marble Institute of America (MIA); and the Purcellville, Va.-based National Terrazzo & Mosaic Association, Inc. (NTMA); is that there is strength in numbers.

That's certainly the case when promoting accepted practices. Trade associations are often the originating source for codes of ethics and professional and safety standards that govern a variety of professions. So if you want to save time and get that spec right, trade associations are key associations to call.

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Take, for example, the NECA-IBEW. These two century-old organizations are dedicated to enhancing the electrical industry through continuing education, labor relations, current information and promotional activities. Backed by the high-quality workmanship provided by electricians and managers trained in the NECA-IBEW framework, NECA, together with a number of other associations in an ANSI-approved format – created and maintains the National Electrical Installation Standards (NEIS). The NEIS is dedicated to promoting higher standards and quality workmanship.

These standards go beyond the National Electrical Code, which is a life-safety code. First published in 1997, the NEIS is a voluntary performance standard that provides guidance as to the quality of the installation and workman-like practices. Although this requirement for installation of electrical products and systems in a “neat and workmanlike” manner appears in NEC Section 110-12 and six other places, according to NECA Executive Director H. Brook Stauffer, it isn’t defined anywhere. NEIS does that.

For architects, referencing NEIS saves spec-writing time, and provides control over workmanship and long-term performance by preventing unrealistic “low-ball” bids that find their costs in extras and change orders since they’ve been given the job on price and not performance. As an enforceable part of the contract documents, NEIS can help reduce misunderstandings among architects, engineers, electrical contractors, owners and facility managers. Currently there are 28 standards covering everything from fiber optics to motor installations. Several other standards are currently under review. Standards can be accessed at the NEIS web site at neca-neis.org.

For more than 60 years, MIA has served as the authoritative source of information on standards of natural stone workmanship and practice and the suitable application of natural stone products. Membership in the association is worldwide and includes nearly 1,300 natural stone producers, exporters/importers, distributors/wholesalers, fabricators, finishers, installers, and industry suppliers – all committed to the highest standards of workmanship and ethics.

MIA publishes a monthly newsletter for members, markets a range of technical publications and consumer pamphlets on natural stone, sponsors business and technical meetings and seminars on industry-related topics, provides educational programming for architects and construction specification professionals, conducts an annual Pinnacle Awards competition recognizing outstanding natural stone projects worldwide and hosts an informative web site for consumers and design and construction professionals at usenaturalstone.com.

Trade associations are often the originating source for codes of ethics and professional and safety standards that govern a variety of professions.

The NTMA establishes national standards for all terrazzo floor and wall systems.

MIA provides complimentary technical advice and opinion to member firms and to architects seeking help with projects involving the application and use of natural stone. In addition, MIA has published the leading reference book for dimensional stone design and construction facts and details – *Dimension Stone Design Manual.* MIA is currently working to launch a natural stone industry accreditation program with a targeted introduction in 2006.

Raising the performance of the industry is also the goal of the NTMA. Founded in 1923, the association was started in Chicago by 20 contractors, 12 of whom are still members, to promote good standards, quality installation, and provide technical support. The association establishes national standards for all terrazzo floor and wall systems. While membership in the association is limited to terrazzo contractors who meet rigid proficiency standards and participate in continuing education seminars, like many trade associations, NTMA provides complete specifications, color plates and general information to architects and designers at no cost on their web site, ntma.com.

It’s a technique that has spanned more than 600 years and can be seen in facilities from airports and stadiums to historic Italian palazzos. So why does such a traditional art form like terrazzo need an association? “As design and construction changes, so must the materials, and we’re here to keep in step with what architects and contractors need for today and tomorrow,” said George Hardy, NTMA Executive Director. “We’re focused on providing thorough information – from design ideas to technical advice,” said Hardy. For example, the NTMA has conducted extensive research on one of the hot topics affecting its members – how moisture affects installation when epoxy is applied on slab. Information about the results is available at the association’s web site.

To further promote and celebrate the craft, NTMA, like many trade associations, hosts an annual design competition – the Honor Awards. These awards offer architects an opportunity to gain recognition for work in specific fields, where larger design competitions could be too expensive or daunting.

Showcased on NTMA’s web site and featured in print materials, the winning projects help communicate various design possibilities. Designed by Langdon Wilson Architectural Planning in Los Angeles, the Getty Villa Renovation in Malibu took the top honor as the 2005 Job of the Year. The museum desired to duplicate terrazzo and marble floors found in Pompeii and classic Italian structures. The association provides details on how projects are executed and provides contact information for architects interested in learning more. And to promote the artistic qualities of process, NTMA also provides a Special Art Award. This year, RTKL Associates, Inc. of

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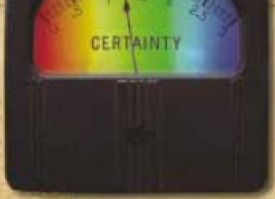
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Professional associations are voluntary organizations of individuals sharing a common interest in the advancement of knowledge, either within a singlefield or across a broad spectrum of disciplines.

2005 Special Art Award from NTMA, Plaza Las Americas, San Juan, Puerto Rico

Washington, D.C., took the prize for the Plaza Las Americas in San Juan, Puerto Rico. The 12-foot art medallion shows off the fluid design potential of terrazzo and sets the mood for the entire food court area, which is part of a one million square foot mall addition.

Professional associations

Professional associations are considered a voluntary organization of individuals sharing a common interest in the advancement of knowledge, either within a single field or across a broad spectrum of disciplines. The major function of these organizations like the American Institute of Architects (AIA), the American Society of Landscape Architects (ASLA), the Design-Build Institute of America (DBIA), (all based in Washington, D.C.), and the Illuminating Engineering Society of North America (IESNA) of New York, the Construction Specifications Institute (CSI) of Alexandria, Va., the American Institute of Steel Construction (AISC) of Chicago, Ill., and the International Code Council (ICC) of Falls Church, Va., is to aid and encourage the collection, collation, and dissemination of knowledge for the benefit of their members and the community as a whole.

"There was no real contact, only competition," commented Peter Walker, FASLA, on the state of communication among landscape architects before the ASLA established a dialogue among leading professionals, with its CEO council. The council provides a secure forum for firm leaders to discuss details of the business, customer trends and current challenges. Providing such targeted networking groups is one of the most valuable offerings of professional associations.

Walker is Partner-in-Charge of Peter Walker and Partners, Landscape Architecture, Berkeley, Calif. Founded in 1983, the firm employs approximately 35 landscape architects, whose projects span the world, from the 1,000-acre Millennium Parklands in Sydney, Australia, to the World Trade Center Memorial in New York. "There are diverse interests in this profession, with some landscape architects focused on ecology, others on style, and even more focusing on everything in between," said Walker. "Professional associations give you the opportunity to hear what's really going on, but you have to put in the time."

While some associations put focus on one profession, others like DBIA take a broader focus. One of the youngest associations, DBIA was founded in 1993 to advocate and advance the design-build method of project delivery within the design and construction community. The method incorporates architecture/engineering and construction services under a single contract to provide a seamless team. DBIA members include practitioners from all project phases, plus public- and private-sector project owners.

"To build a building you need more than one discipline. Today you need to assemble a team of professionals – from insurers and owners to architects and facilities maintenance engineers," said Barry Bannett, CEO, DBIA of The Bannett Group, Ltd. of Cherry Hill, N.J. "We're focused on educating the industry on this method," added Bannett, who serves as an instructor for the association's certification program, Designated Design-Build Professional™. Currently, many GSA projects require the design-build method for their contracts, with expectations of it becoming the preferred project delivery method by 2011.

CSI also takes an integrated approach. Its 17,000 members represent all disciplines engaged in on-residential building design and construction. CSI's mission is to continuously improve the process of creating and sustaining the built environment. They do that by facilitating communication among all those involved in that process. "Our work is about creating a common language among the industry by providing uniform ways of classifying the entire life-cycle of a project," said CSI Executive Director Karl Borgstrom, Ph.D. "Members like our association because we're diverse – we have people from all over the industry, the nation and the world working together to improve the way we work together."

In the 1970s, CSI developed MasterFormat™, which provided a method for organizing all specifications needed to construct a building. Through MasterFormat's 16 divisions, the industry took a major step toward a uniform approach for the organization of information contained in construction project manuals. CSI recently released an updated format and has been instrumental in developing the National CAD Standards and the new OmniClass™, that provides an organized structure and common language for all information generated by the AEC industry.

A unique education offering from CSI is their Certified Product Representative program. While they offer educational programs to architects, the representative program helps train product representatives to take off the sales person hat and put on that of a partner who helps architects meet design objectives instead of making the quick sale – a definite benefit to the industry.

Professional associations also provide extensive volunteer opportunities, which can expand members' knowledge on everything from how to run your business to new technologies. Volunteer members throughout the world help IESNA achieve their mission of improving the state of lighting to benefit both the profession and the public.

"Our membership consists of lighting experts who pride themselves on being a resource and many of whom contribute to our more than 70 technical committees," said IESNA's Executive Vice President Bill Hanley. "We're here as a resource to the design and construction community. If you want to know about standard practices, ANSI standards and current issues from dark sky issues to recycling, we're the ones."

The AISC provides as similar benefit to architects searching for information on steel construction. The AISC is dedicated to working

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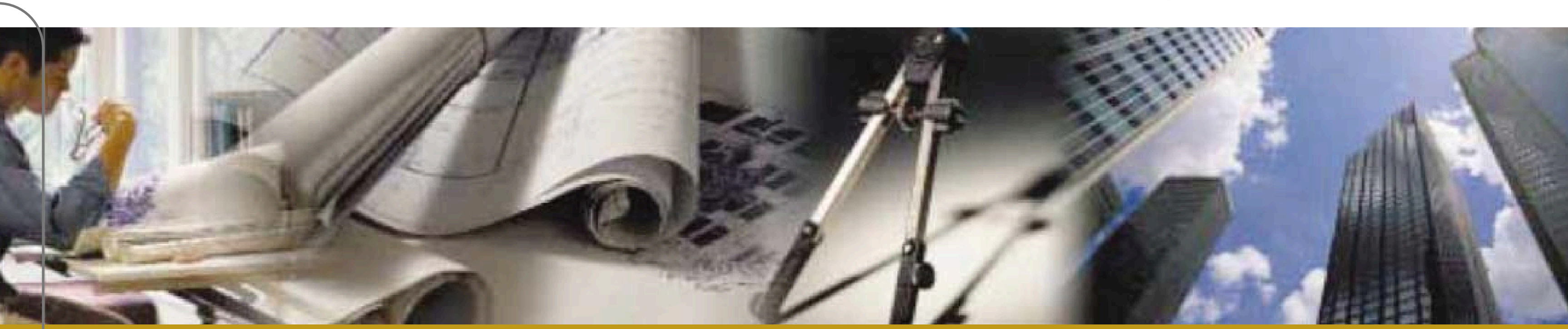

The Construction Specifications Institute (CSI) is the organization behind *MasterFormat™ 2004 Edition*, *The Project Resource Manual — CSI Manual of Practice, the National CAD Standard Version 3.1, OmniClass*, The Annual CSI Show™ & Convention, The Product Representative Academy, The Contract Administration Academy and other products and programs that are changing the way you do business. Be a part it — join CSI!

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- Professional recognition — CSI acknowledges excellence through its prestigious honors and awards program
- The Annual CSI Show™ & Convention — Receive discounted access to this industry forum known for its education programs and networking opportunities
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with designers, contractors and owners to increase the ease and efficiency with which structural steel is used for buildings and bridges. AISC's membership includes nearly 10,000 designers and more than 600 steel fabricators, steel mills, and steel service centers.

In addition to producing a number of critical specifications and codes, including the Specification for Steel Buildings and the Code of Standard Practice, AISC offers architects a number of resources, including continuing education, publications, competitions, and discounts and other programs for architectural students. AISC offers both printed and in-person continuing education. In fact, AISC regional engineers will hold a lunch-and-learn in an architect's office at no charge with topics ranging from fire protection to sustainability.

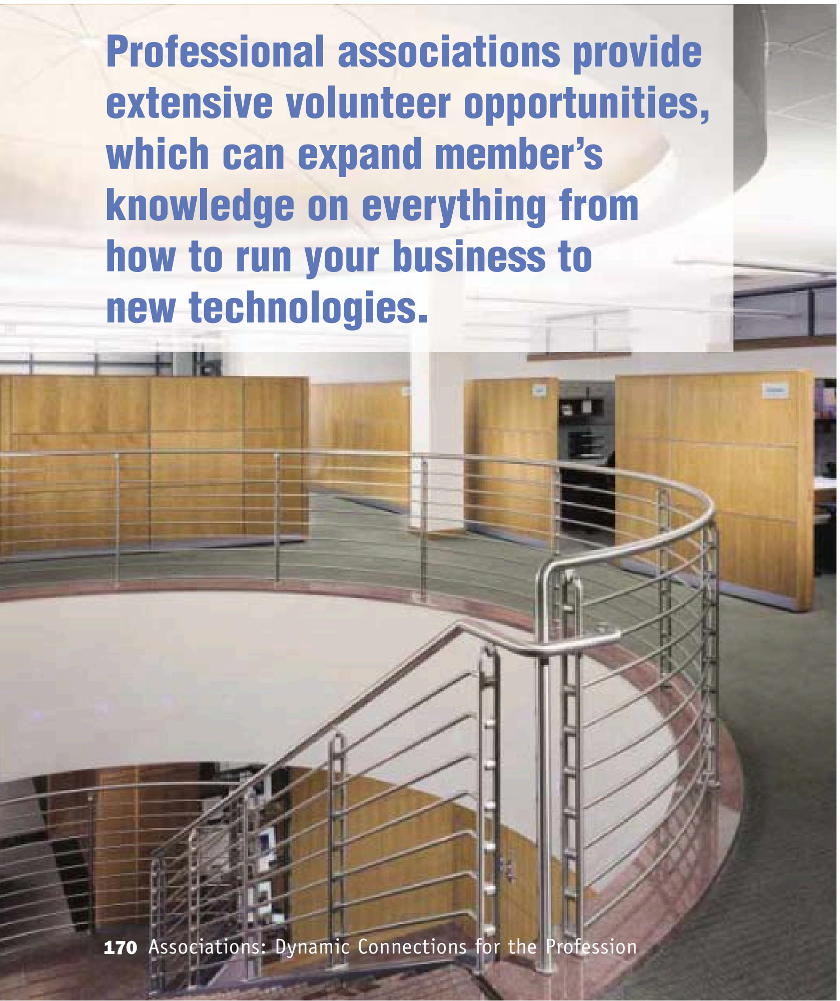
A key resource is AISC's Steel Solutions Center. Architects in the preliminary stages of designing a structure can contact the center and receive a "conceptual solution," which includes basic layouts as well as cost and scheduling information. The Steel Solutions Center is also available to answer all technical questions. Architects can reach the center by calling toll-free 866.ask.aisc or by emailing solutions@aisc.org.

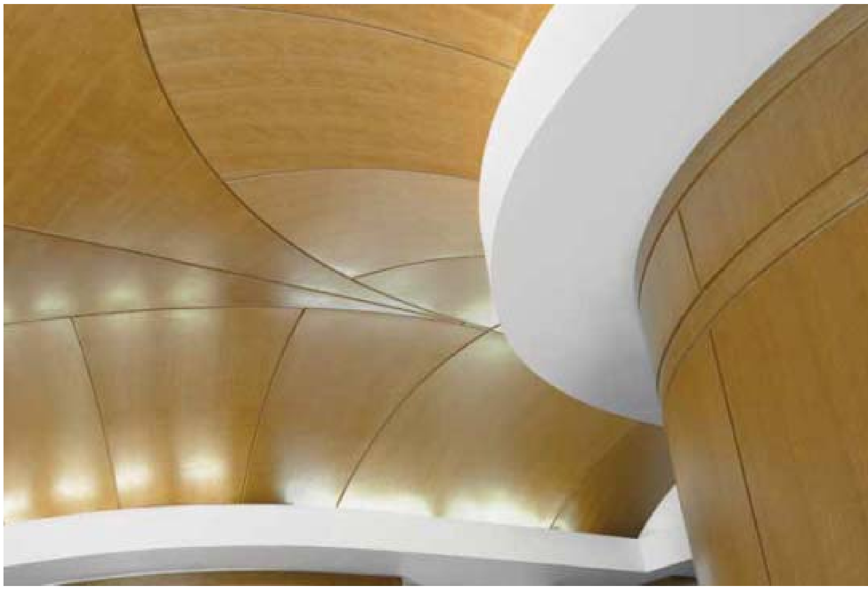
On average, professional associations allocate one of every four dollars they spend to member education and training and public information activities. This accounts for $3.6 billion per year, or about 18 percent of the average association's budget. Take, for example, this article. Architects seeking Continuing Education credits from the AIA can earn one AIA/CES Learning Unit by reading this article, answering the related questions and filing their answers. Complete instructions are on page 180.

Additionally, association members spend in excess of $10 billion annually to participate in these education programs, which can include everything from national conferences and online information to association newsletters and specialty meetings.

Photo Courtesy of AWI Institute

Professional associations provide extensive volunteer opportunities, which can expand member's knowledge on everything from how to run your business to new technologies.





AWI offers designers its internationally-recognized Quality Certification Program (QCP), which certifies woodworking firms that demonstrate consistent adherence to quality standards.

Education is a key component of the ICC – with a new code to promote, education is a must. Formed in 1994 with the support of the AIA, the ICC and its diverse membership were charged with developing a single set of comprehensive and coordinated national model construction codes. They are dedicated to providing the right quality codes, standards and products for all concerned with the safety and performance of the built environment. The founders of the ICC are Building Officials and Code Administrators International, International Conference of Building Officials and Southern Building Code Congress International. These organizations previously developed three separate sets of model codes used throughout the United States. By 2000, a complete set of International Codes was available and the International Code Council became a consolidated organization in early 2003.

Architects and other design professionals make up almost 30 percent of the ICC, which offers code support services, code opinions and technical assistance from experienced staff engineers and architects. Members receive extensive professional development services including on-site training, institutes, continuing education units, symposiums, teleseminars and on-line training.

Recognizing leading ideas in their industries is a component of many professional associations. For example, each year the IESNA and ASLA host professional awards programs to recognize the best in their industry from around the globe.

Last year Michael Van Valkenburgh Associates, Inc., New York, NY, beat out more than 600 competitors to take home a coveted Design Award of Merit from the ASLA for Feral Geometry: A Narrative of Modern Materials on the Bank of Turtle Creek in Dallas, Texas.

"The ASLA provides a great information stream, from project announcements to national news affecting the profession," said Michael Van Valkenburgh, an ASLA member since 1981. "One of the most important things the association has done is make architects aware of when to incorporate landscape architects into projects – and that's early. There is more understanding now of the benefits of incorporating a professional early in the design process to garner the best results, especially in complex urban projects," he said.

But urban projects aren't the only ones getting attention. U.S. homeowners are spending more on their environments. The National

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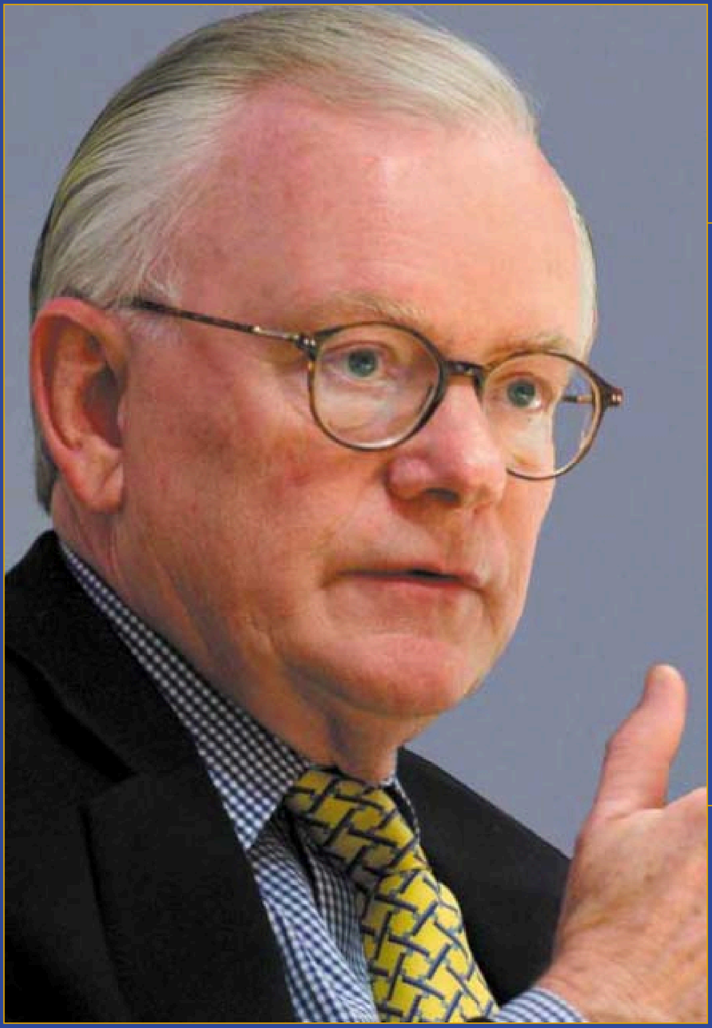

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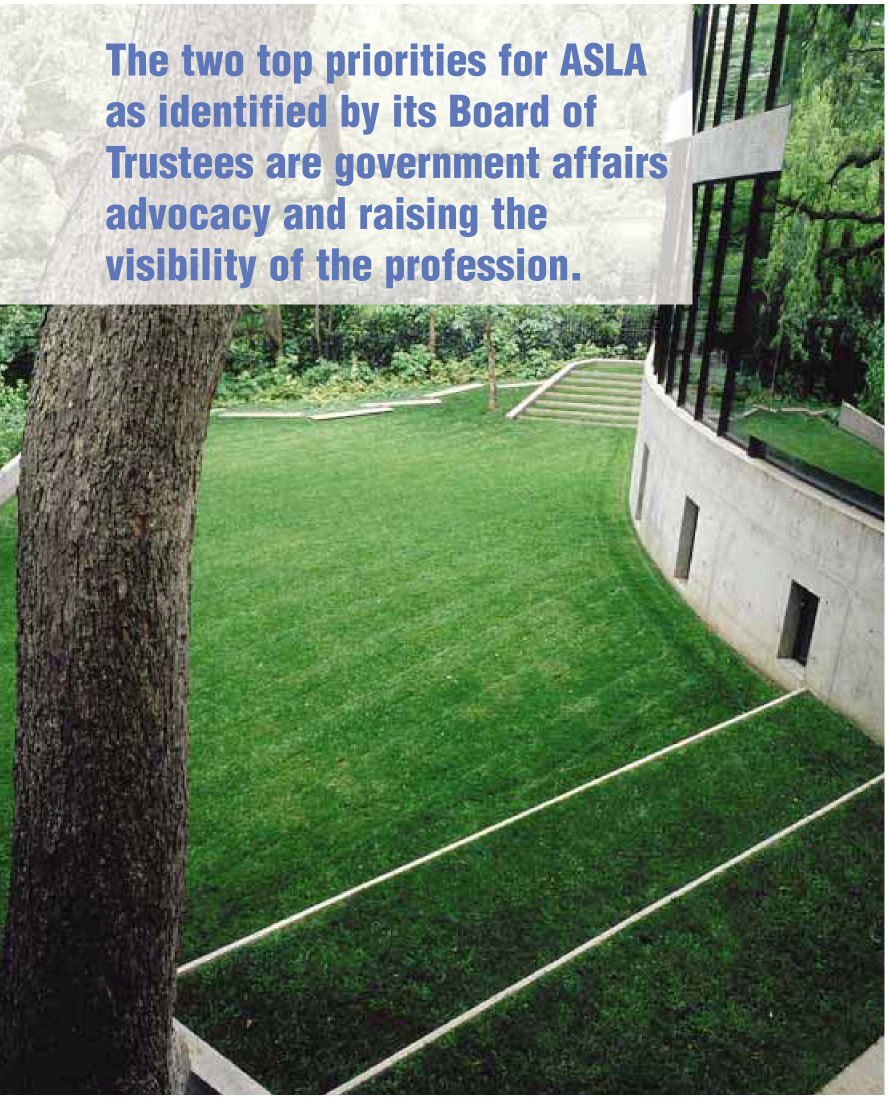
> **The two top priorities for ASLA as identified by its Board of Trustees are government affairs advocacy and raising the visibility of the profession.**



ASLA 2004 award recipient, Feral Geometry, Dallas, TX, by Michael Van Valkenburgh Associates, Inc., photo by Carolyn Brown. A series of lawn steps extend from the house, a site of transition from interior to an exterior area of horizontal expansion.

Gardening Association reported that in 2004, homeowners spent an estimated $38.4 billion on their yards, up from $22.5 billion five years earlier. This new spending trend garnered a two-page article in an April edition of the *Wall Street Journal*, which also featured varied winning projects from landscape architects around the country and input from the ASLA. Such public relations activities that promote the profession are a key contribution of professional associations.

In New York next year? In celebration of its centennial, the IESNA is sponsoring an exhibit at the Museum of the City of New York. The exhibit entitled "Transformed by Light: the New York Night," will open on January 8, 2006, in conjunction with its Centennial Conference, and will emphasize the influence of light on society, focusing, in particular, on the changes to urban culture brought about by the production of light.

While professional associations spend about three times more on education programs than they do on direct lobbying of government, lobbying efforts play an essential role for many professional associations.

Think back 20 years. What did "Green Design" mean? And what was your accessibility plan for that office project? Thanks to the many design and construction associations and their dedicated members, architects now have a method of working with groups like the U.S. Green Building Council, which certifies "green" projects and the Americans with Disabilities Act, which ensures that all Americans have broader access to offices, housing, entertainment and public spaces.

The following are current governmental interests of the AIA, which has a number of member-organized groups supporting their efforts:

- Sustainable, healthy, livable communities.
- New incentives for affordable housing, green buildings, historic preservation and Brownfield renewal.
- Energy and water conservation.
- Better, safer schools and civic spaces.
- Affordable health insurance for small businesses.
- Liability laws that minimize lawsuit abuse.
- Reduced permitting delays.
- Clear building codes and accessibility guidelines.
- Sound licensing regulations.

According to Ann Looper, ASLA Director of Public Relations & Resource Development, the two top priorities for ASLA as identified by its Board of Trustees are government affairs advocacy and raising the visibility of the profession.

At the federal government affairs level, top issues for the ASLA include:

- Support for directives and funding to replace existing makeshift building and monument security devices with comprehensive, well-designed solutions.
- Funding for the Historic American Landscapes Survey (HALS).
- Increased funding for environmental, planning, and transit initiatives in the surface transportation reauthorization.
- A new Safe Routes to School program.
- Various initiatives providing more efficient use of water supplies and stormwater infrastructure improvements.

At the state level, ASLA has promoted the 50 by 2010 Licensure Campaign for the past four years to establish practice act licensure in every state and the District of Columbia by the year 2010. In 47 states, the term *landscape architect* can apply only to someone who is licensed. The association is pushing for 50.

Most professional associations have similar government agendas, which can be accessed via their web sites.

Manufacturing associations

Manufacturing associations have many similarities to both trade and professional organizations in their drive for education and government advocacy. They are typically a consortium of manufacturers who are dedicated to raising the visibility of their industry and establishing consensus programs to improve overall quality. The Schaumburg, Ill.-based American Architectural Manufacturers Association (AAMA), the Architectural Woodwork Institute (AWI) of Reston, Va., the Cedar Shake & Shingle Bureau (CSSB) of Sumas, Wash., and the Metal Construction Association (MCA) of Glenview, Ill., are just a few of the manufacturing associations that provide, most often at no cost, product-based information to architects.

That's what CSSB provides architects. According to Lynne

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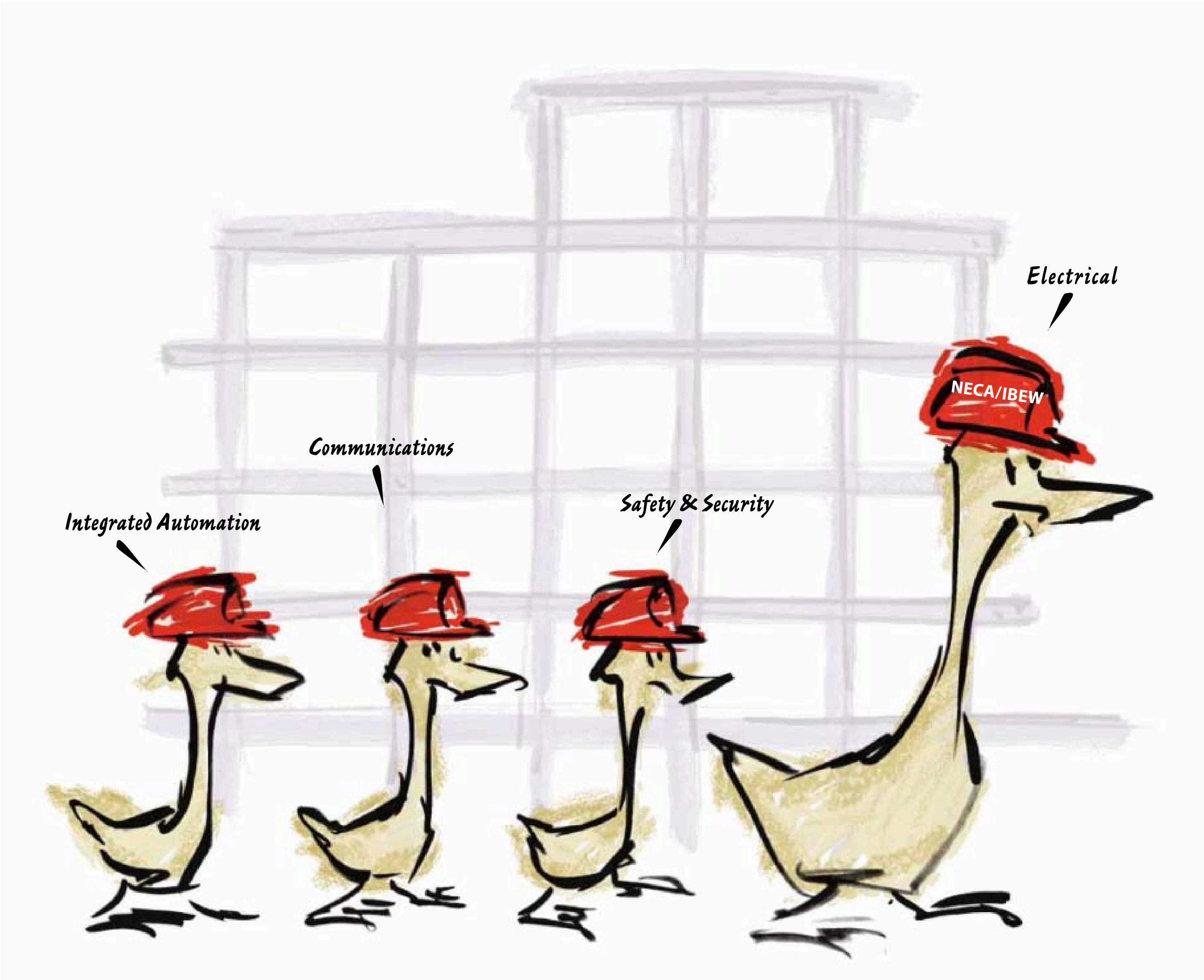

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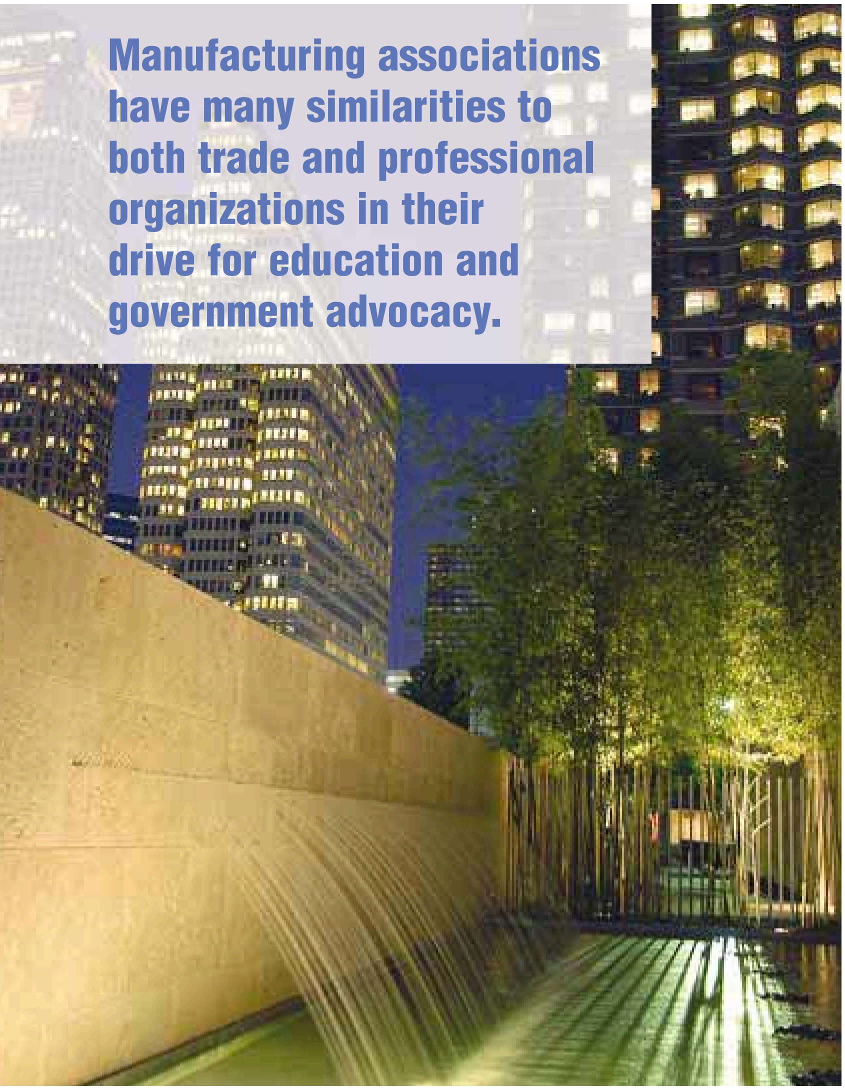


ASLA 2004 award recipient, Nasher Sculpture Center in Dallas, TX, the garden wall fountain at night. (Photo: Tim Wight - Peter Walker & Partners)

Christiansen, CSSB Director of Operations, CSSB is a non-profit association that promotes Certi-label™ cedar shake and shingle roofing and sidewall products through their network of over 400 member manufacturers, distributors, wholesalers, brokers, retailers, associates and approved installers. "Architects can access an entire range of cedar shake and shingle information from our printed literature, educational credit seminars, and online. Even the most unusual questions are welcomed and addressed by field staff with over 100 years of combined experience."

The CSSB has been instrumental in writing and updating grading rules and technical manuals for the industry, encouraging its use in such projects as Camp David, and the Antietam National Battlefield. It functions as the industry champion for State legislative issues, city ordinances and homeowner association issues concerning cedar shake and shingle roofing and siding.

Getting the word out through education is essential to AAMA as well. With almost 70 years of industry experience and an estimated 66 percent of residential products certified through the 43-year-old Gold Label Certification Program, AAMA provides technical expertise and product performance for the residential and commercial fenestration industry. Available on the organization's web site, aamanet.org, its Gold Label Certification Program is fundamental in comparing product performance and determining appropriate product specification based on local code requirements.

Like many associations, the AAMA is broadening its membership to include architects. While membership provides discounts on more than 200 AAMA documents and access to various industry communications, AAMA is dedicated to providing education to all, member or no. Free online courses are available on a dedicated AIA/CES web page within the "architect" section of the association's web site. Currently there are three courses available with at least two more expected this year.

For more than 50 years, the AWI has kept the design community informed by standards setting, the training of design professionals and woodwork manufacturers, and the marketing of members' products and services to potential business partners. About 10 years ago, an Affiliate Membership classification for design professionals was created. Modest membership dues offer a cost-effective way for architects and interior design professionals to become better acquainted with advances in architectural woodwork. Today, AWI counts thousands of Affiliates among its membership.

If one product has defined the growth of AWI it is the *Quality Standards Illustrated (QSI)*. Since its initial appearance in 1961, the Quality Standards Manual, now in its eighth edition, has become a standard reference guide, recognized by architects, designers and specifiers as the authoritative source on fine architectural woodwork. Working with the Architectural Woodwork Manufacturers Association of Canada (AWMAC), the latest edition was introduced as a unified North American Standards in 2003.

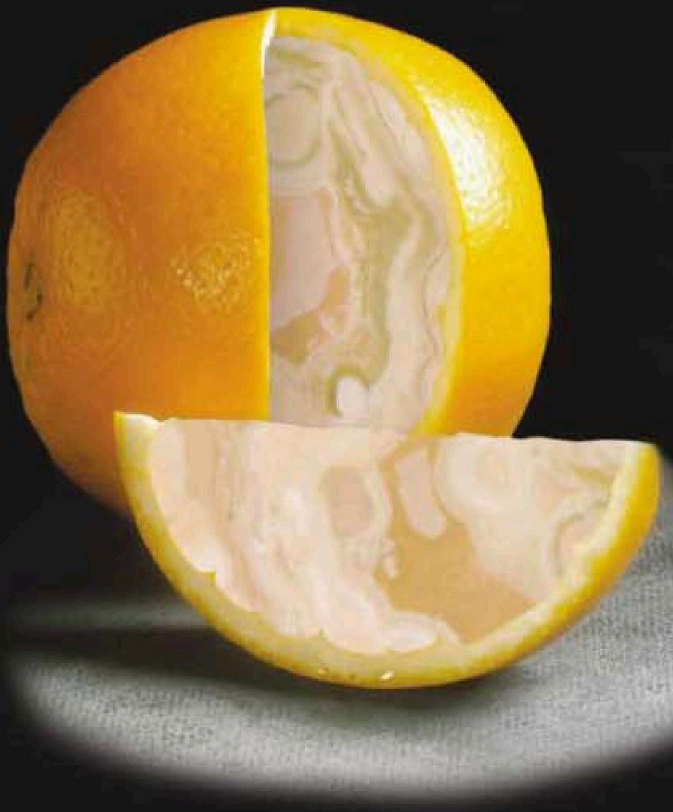
AWI offers designers its internationally-recognized Quality Certification Program (QCP), that certifies woodworking firms that demonstrate consistent adherence to quality standards. Certified firms are tested and inspected by industry professionals on their ability to fabricate, finish and install projects according to the *Quality Standards Illustrated*.

According to AWI Executive Vice President Judith Durham, nearly every General Services Administration project incorporated the QSI and member work. One of the latest projects is the Prettyman addition to the Federal Courthouse in Washington, D.C. This project is a collaboration of three AWI member firms involving millions of dollars of fine woodworking. Over the years, AWI members have helped renovate the White House, the Library of Congress, and dozens of state houses across the country.

Promoting the use of metal roofing through education is the key objective of the MCA, whose members' include producers and manufacturers of metal roof and well products, as well as suppliers who produce accessories and raw materials. The MCA has numerous AIA-certified continuing education programs and technical resources on its web site, and its members work with code bodies to provide accurate information on sustainability and applications, and to correct discrepancies. For example, few know that virtually all of MCA's metal products are 100 percent recyclable and have a minimum of 25 percent recycled content.

According to MCA's Director of Marketing Steven Collins, MCA has launched a marketing and educational program entitled "The Metal Initiative." This is a coalition of metal related companies and other associations who have banned together to expand the use of metal in construction.

This consortium also supports MCA's Metal Roofing Certification Program, which is designed to promote widespread use of appropriate metal roofing products that have met designated quality standards. Design professionals and contractors are now able to clearly differentiate quality levels of steep slope metal roofing by applying industry performance standards and identifying the most appropriate metal roofing products for specific needs.■



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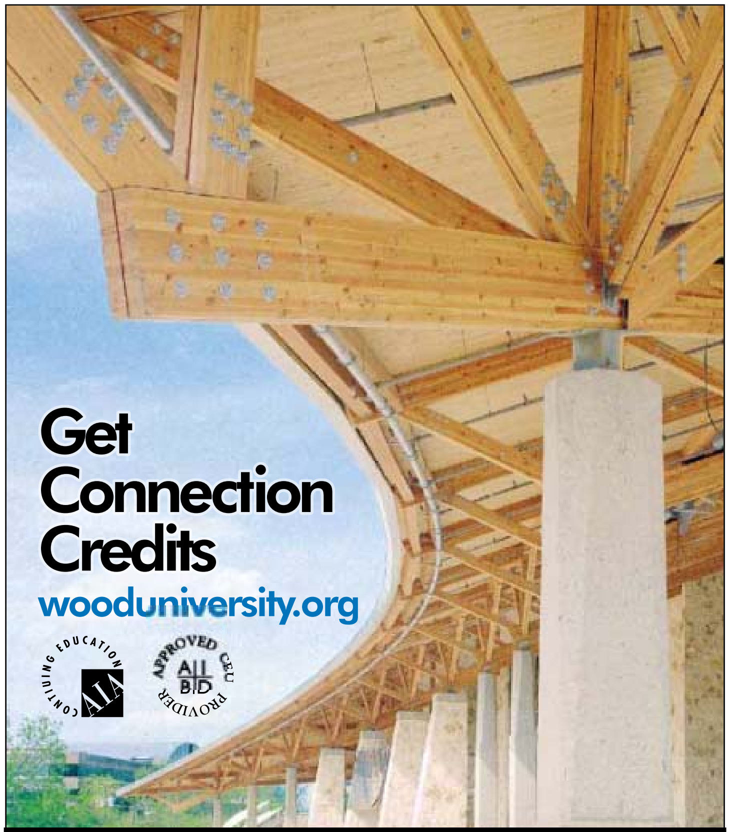
Using Association Resources

With more than 77,000 of them out there, how do you know which association is right for you? And do you have to join to get the information you want and need? Here are some questions to ask. Remember, many of the answers can be found on the associations' web sites.

1. Is it an educational opportunity for me? In a given year, how many conferences, seminars, and meetings does the association offer, and who attends?
2. Do my competitors belong to this association?
3. Does the association have something to do with my business?
4. What type is the association (Trade, Professional, Manufacturing)?
5. Do I want an association that is international, national, regional, statewide, or local in scope? Does the association have a local chapter?
6. How is the association managed (association management company, paid staff, volunteers, etc.)?
7. What are the dues and what is the total annual budget? How is it allocated?
8. Is the membership growing?
9. What is the association's reputation in my industry?
10. What information do they provide on a regular basis? What publications does the association produce? How often are they published?



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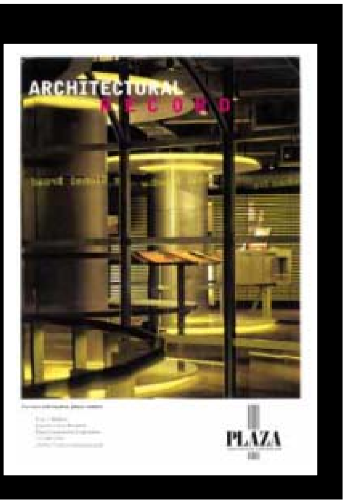

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CLICK FOR ADDITIONAL REQUIRED READING

The article continues online at: http://archrecord.construction.com/resources/conteduc/archives/0506associations-1.asp

To receive AIA/CES credit, you are required to read this additional text. For a faxed copy of the material, contact Marissa Wyss at *Architectural Record*, (212) 904-2838 or e-mail marissa_wyss@mcgraw-hill.com The following quiz questions include information from this material.

AIA/ARCHITECTURAL RECORD **CONTINUING EDUCATION** Series

LEARNING OBJECTIVES

After reading this article, you should be able to:

- *Know the difference between trade, professional and manufacturing associations*
- *Understand the value of associations to the profession*
- *Understand how to utilize association resources*

INSTRUCTIONS

Refer to the learning objectives above. Complete the questions below. Go to the self-report form on page 226. Follow the reporting instructions, answer the test questions and submit the form. Or use the Continuing Education self-report form on *Record's* web site—*archrecord.construction.com*—to receive one AIA/CES Learning Unit including one hour of health safety welfare credit.

QUESTIONS

1. What association did AIA support the foundation of in 1994 to create a common construction code?
   a. American Architectural Manufacturers Association
   b. Construction Specifications Institute
   c. International Code Council

2. What are the top priorities for most associations?
   a. Conducting industry research
   b. Communicating best practices
   c. Disseminating product information
   d. Providing continuing education
   e. All of the above

3. According to the American Society of Association Executives 25 percent of associations' budgets are spent on what?
   a. Government lobbies
   b. Administrative duties
   c. Member education and training and public information activities
   d. Volunteer activities

4. Information provided by associations is usually very costly to attain.
   a. True
   b. False

5. In how many states can the term *"landscape architect"* only be used by someone who is licensed?
   a. 29
   b. 47
   c. 50

6. Associations are not required to pay taxes.
   a. True
   b. False

7. Traditionally, what associations are considered the originating source for codes of ethics and professional and safety standards that govern a variety of professions.
   a. Trade
   b. Professional
   c. Manufacturing

8. What has become the top communication technology for associations?
   a. Print newsletters
   b. Web sites
   c. Annual meetings

9. You must be a member to receive information from associations.
   a. True
   b. False

10. What is the fundamental common interest for professional associations?
   a. Making money
   b. Creating standards
   c. Advancing professional knowledge

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Guide to Association Resources

	Type	Affinity Partner discounts on products and services	Award Program	Career Center/Member discount for posting resumes or jobs	Continuing Education	Directory	Educational Programs	Forms/Contracts	Government Lobby	Industry Research	Library & Archives	Licensure Advocacy	Local and State Chapters	Mentoring Program	Newsletter/Journal	Public Relations	Professional Designation	Professional Interest Groups	Publications and Resources	Self-Study materials	Student Chapters	Standards/Certification	Surveys	Technical Information	website member access (secure)
American Institute of Architects (AIA) AIA.org	Professional	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
American Institute of Steel Construction (AISC) AISC.org	Professional		○	○	○	○	○			○	○								○	○		○	○	○	
American Society of Landscape Architects (ASLA) ASLA.org	Professional	○	○	○	○	○	○	○	○	○	○	○	○		○	○	○	○	○	○	○		○	○	○
Construction Specifiers Institute (CSI) CSInet.org	Professional	○	○	○	○	○	○	○		○	○		○	○	○	○	○	○	○	○		○	○	○	○
Design-Build Institute of America (DBIA) DBIA.org	Professional	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Illuminating Engineering Society of North America (IESNA) IESNA.org	Professional	○	○		○	○	○				○		○		○	○		○	○	○	○			○	○
International Code Council (ICC) ICCsafe.org	Professional	○	○	○	○		○	○	○	○	○	○	○		○	○	○	○	○	○	○	○	○	○	○
Engineered Wood Association (APA) APAWOOD.org	Trade					○	○								○										
Marble Institute of America (MIA) Marble-institute.org or usenaturalstone.com	Trade	○	○		○	○	○	○		○	○	○			○	○			○	○		○	○	○	○
National Electrical Contractors Association and the International Brotherhood of Electrical Workers (NECA-IBEW) NECA-NEIS.org	Trade		○			○	○	○	○	○	○		○		○	○			○			○		○	
National Terrazzo & Mosaic Association, Inc. (NTMA) NTMA.com	Trade		○		○	○	○			○						○			○			○		○	
American Architectural Manufacturers Association (AAMA) AAMANET.org	Manufacturing				○	○	○			○	○				○	○			○	○		○		○	○
Architectural Woodwork Institute (AWI) AWINET.org	Manufacturing		○		○	○	○			○	○		○		○	○			○	○		○	○	○	○
Cedar Shake and Shingle Bureau Cedarbureau.org	Manufacturing				○	○	○	○	○	○	○				○	○			○			○		○	
Metal Construction Association (MCA) Metalconstruction.org	Manufacturing		○		○	○	○			○					○	○			○			○	○	○	○

○ Professional ○ Trade ○ Manufacturing

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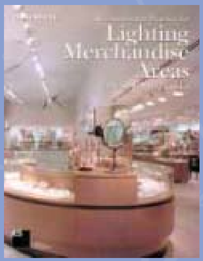
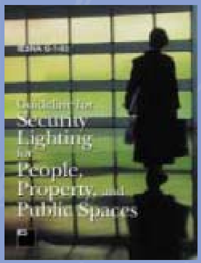
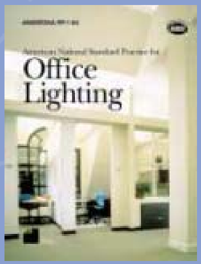


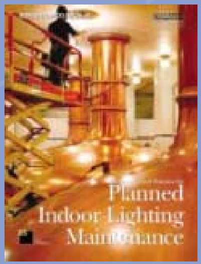
Lighting Merchandise Areas



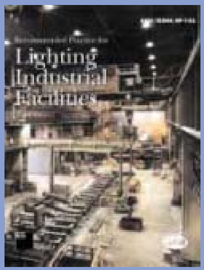
Guideline for Security Lighting for People, Property, and Public Spaces



Office Lighting



Planned Indoor Lighting Maintenance



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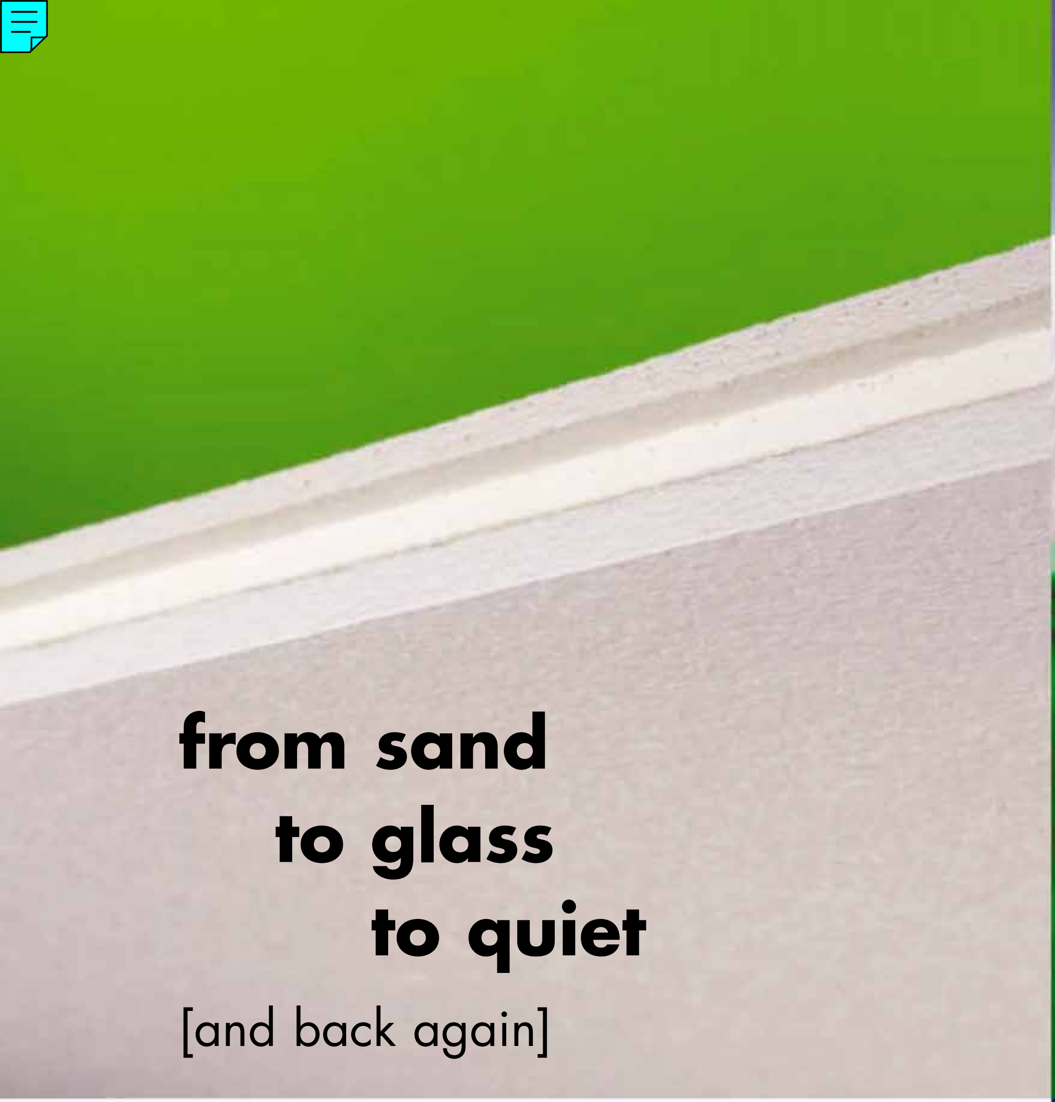

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Interiors

Architects distill a Toronto art gallery from a brick shed, while form finds freedom at New York City firehouses

BRIEFS

The results of Pantone's annual color survey are rosy. Make that rose/beige. The national polling of 2,760 consumers found that more women than men would paint their house exteriors "sunshine" or rose/beige, and females preferred their interiors in risk-taking hues of lavender, beach glass, mauve mist, blush, and tender green. Men preferred more neutral shades. Younger respondents, age 18 to 20, preferred rooms awash in bold red and blue.

Students at the New York School of Interior Design took a decidedly architectural approach in their latest thesis projects. A highlight: Shi Ying Wu redesigned New York's Penn Station with skylights and courtyards to evoke the lost grandeur of the original McKim, Mead and White structure demolished in the 1960s, but in a Modernist idiom.

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Mary Bright Studio
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The Distillery District: It has a nice ring to it, right? But Toronto's new urban-renewal zone is much more than a bar-hopper's paradise. Set on 13 downtown acres, the 40-plus buildings constitute the largest and best-preserved collection of Victorian industrial architecture in North America. Once a run-down bottling and manufacturing complex, the Distillery has recently morphed into a pedestrian-only village dedicated to arts, culture, and entertainment. Acclaimed art galleries, artists' live/work studios, restaurants, bars, and live music venues enliven this vibrant cultural center. This month, we visit one of the site's anchor projects, the Corkin Shopland Gallery (below), where Shim-Sutcliffe Architects transformed the 19th-century Pure Spirits Building into an equally spirited showcase for art.

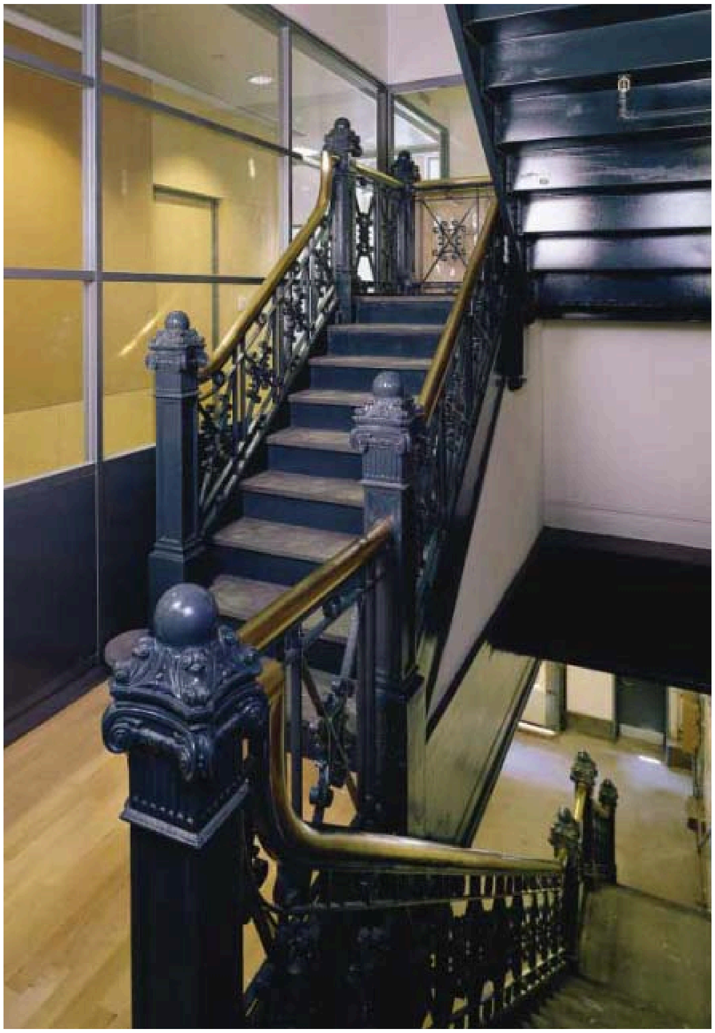
Prendergast Laurel Architects faced unique live/work programs and an array of site conditions while extensively renovating five New York City firehouses, some dating from the 19th century. Though the tight-knit fraternity of firefighters had adapted to years of makeshift station renovations, this overdue overhaul has granted them clean-lined, Modernist interiors that provide plenty of room to relax and maneuver.

Most agree that if you draw the draperies, a room with a view seems to lose its luster. Or does it? In the case of curtains created by Mary Bright Studio, the vertical plane covering a window isn't merely a cloak of privacy, but an artful canvas capturing geometry and light. The interstitial veils between indoors and out, these window "treatments" are as rigorously engineered as the architectural interiors they complement. Mary Bright, the late designer who founded the curtain production studio in the 1980s, once famously designed a cocktail dress and matching hat incorporating Levolor blinds. Clearly, this was a woman peering through a window of subversive creativity. We recently visited the New York City studio's team of David Paskin and Erik Bruce to see how they are carrying on in the Bright tradition. Architects, especially, have come to count on the design/build house for tactile, collagelike curtains that turn fluid forms into essays of architectonic expression. Read on, and you may never feel the same way about drapery pleats again. *William Weathersby, Jr.*

PHOTOGRAPHY: © JAMES DOW

With durable, modern materials, Prendergast Laurel forges deft renovations of **New York City Firehouses**

By William Weathersby, Jr.



At Ladder Company 25 on the Upper West Side of Manhattan, a cast-iron-and-brass stair banister was restored. New maple flooring became a standard material.

An essential part of New York City's civic infrastructure, the 220 fire stations spread across five boroughs encompass many architectural styles and construction techniques. Some facilities dating from the early-19th-century era of horse-drawn wagons were later adapted piecemeal for modern use, while many postwar buildings have undergone partial renovations over the decades. The condition of the interiors varies from site to site. "Some are beautiful wrecks," says architect David Prendergast, "and several are fine examples of historic architecture." While the members of many engine companies have craftily attempted to informally adapt their firehouses to changing lodging and equipment needs, he says, "These rundown environments have sometimes forced firefighters to live on-site almost like squatters."

Although the city's economic crisis of the 1970s brought capital improvements to a standstill—with long-lasting aftershocks—a decade ago the New York City Department of Design and Construction (DDC) collaborated with the Fire Department of New York (FDNY) on a plan to comprehensively renovate firehouses citywide. Instead of patching stations back together as a stop-gap, the authorities earmarked funds to begin top-to-bottom overhauls. In 1999, Prendergast Laurel Architects won one of the commissions to renovate five fire stations, three in Manhattan and two in Brooklyn, over a period of five years. The design team tackled Engine Companies 1, 93, 210, and 282, plus Ladder Company 25.

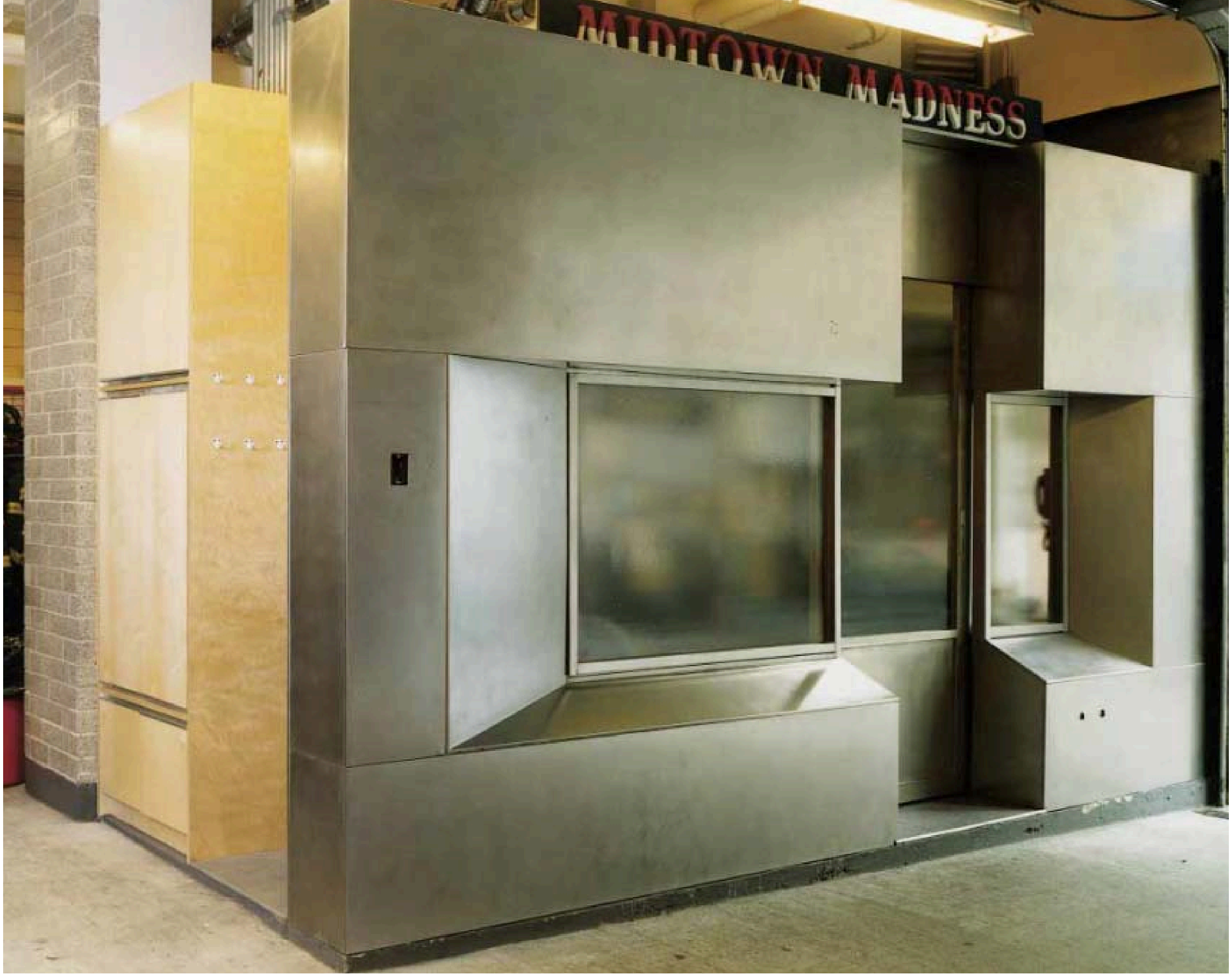
"The interiors of all five buildings were extremely deteriorated," Prendergast says, "while their exterior shells were repairable." Working with construction budgets that ranged from $2.4 to $5 million per firehouse, the architects restored street-facing facades, shored up building infrastructures, and fully renovated and reorganized interiors.

While the architectural pedigree and size (8,800 to 18,000 square feet) of each house varied, the program remained essentially the same. Each station accommodates upgraded dormlike sleeping areas, offices, communications stations, a kitchen, lounges, bathrooms, a gym, a garage, and equipment storage.

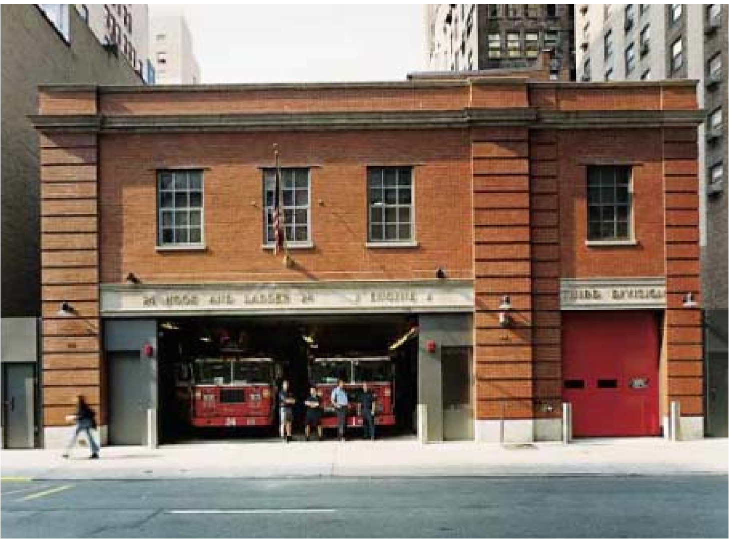
Aesthetically, many firefighters seemed to favor traditionalism, Prendergast observed. They preferred warm paneling, heavy and plump furniture, and mostly darkened rooms. (A reproduction Queen Anne table was drafted to support piles of reports in one fire-truck bay, for example, and the dorm windows of many houses were papered over with newsprint or garbage bags to keep sunlight out during daytime sleep shifts.) For this renovation cycle, however, "We worked with the DDC and FDNY to introduce a more Modernist kit-of-parts approach of architectural forms and finishes," Prendergast says. Because most interior spaces were to be gutted, the process provided the opportunity to streamline floor plans and create a consistent interior style from station to station.

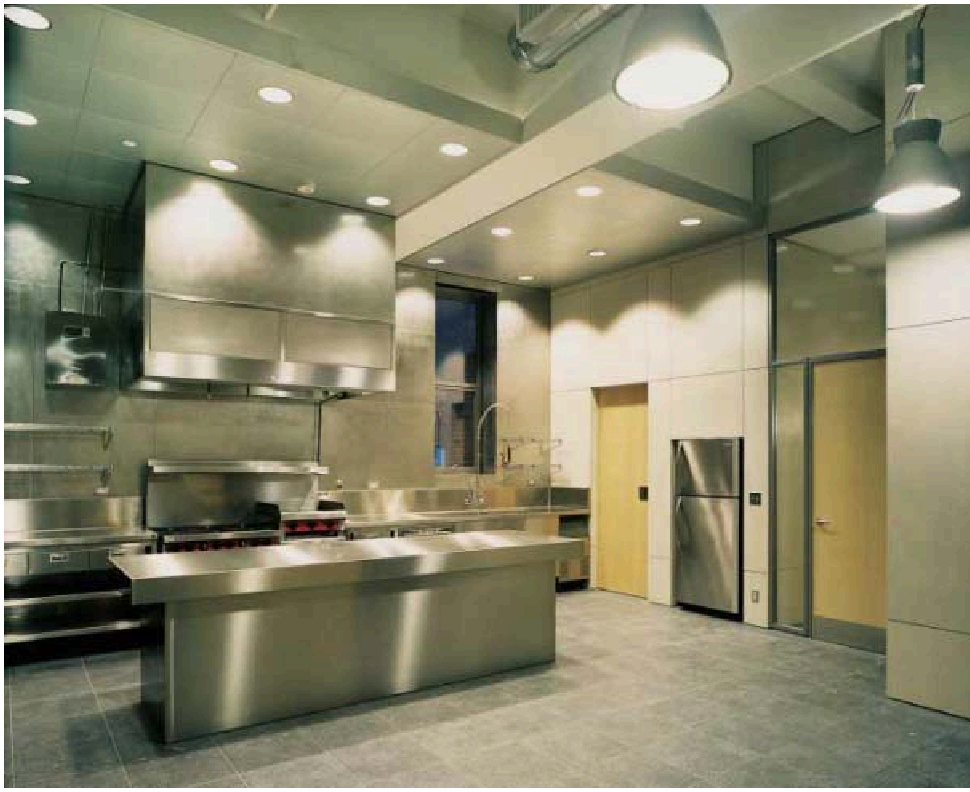
Taking each structure back to its skeletal form was the major undertaking of each renovation. The process required shoring up or reframing the mostly brickwork facades (in some cases dismantling and reassembling them brick by brick), installing new steel-beam structural

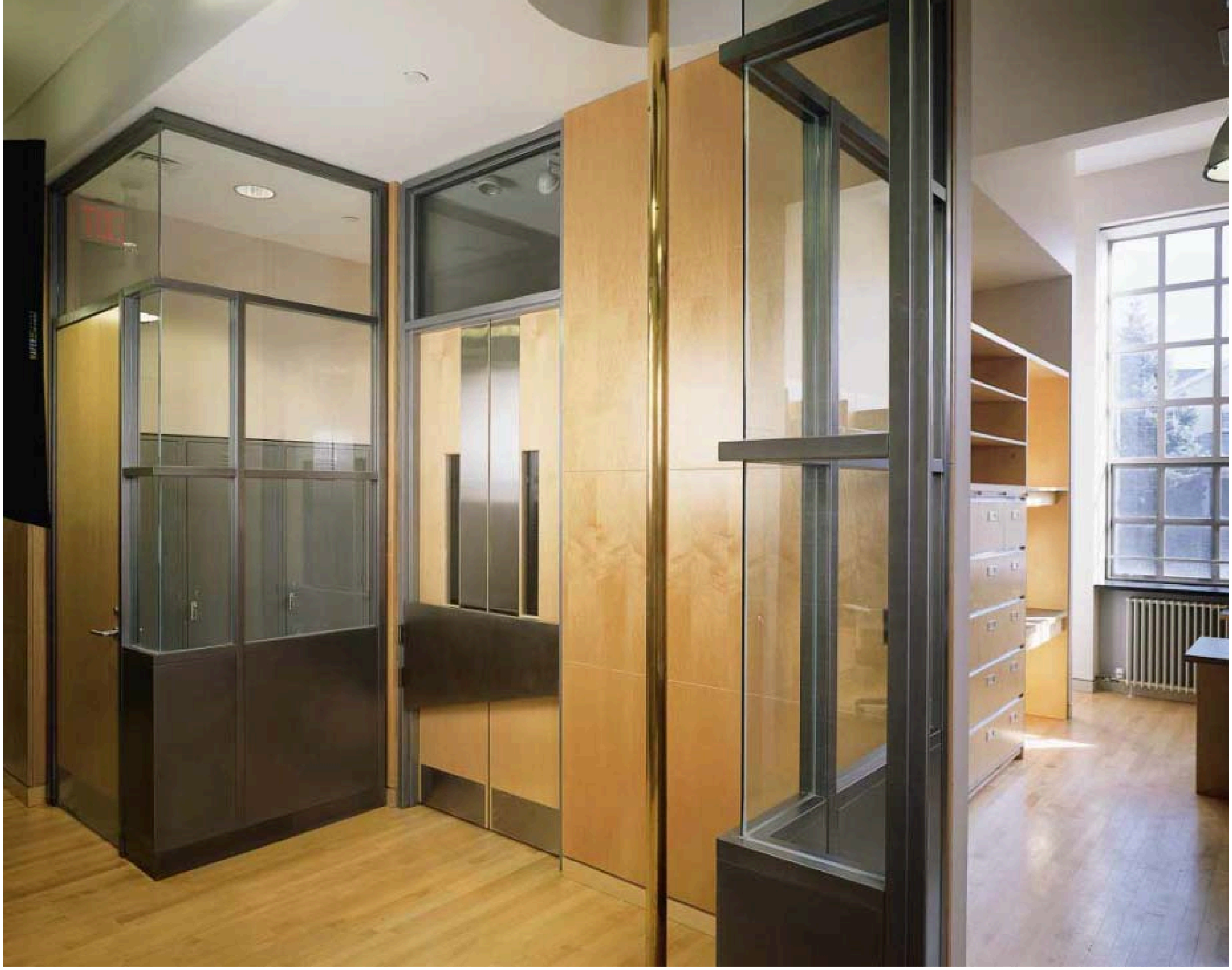
PHOTOGRAPHY: © WHITNEY COX



The restored facade of Engine Company 1 (below) masks a new steel-beam infrastructure and overhauled interiors. The site's "house watch" command center (above) features sculptural steel cladding. A new kitchen (right) was a priority.







Glass-and-metal enclosures replaced plaster walls to allow light into Engine Company 282's core (above). Built-in wood cabinetry standardized the look of offices. The 282 house watch artfully combines steel and glass (below).

members, adding new central HVAC systems, and reinforcing new poured-concrete garage floors to support modern trucks and apparatus. Stripping away all worn and damaged finishes revealed each basic masonry structure. Then the architects exposed and refinished interior brick walls. They also revealed original structural ceilings, taking advantage of up to 17 feet of available ceiling height in some locations. Some significant architectural details were retained and showcased—such as a multifloor Victorian cast-iron staircase and ornamental terra-cotta medallions at Ladder Company 25 on the Upper West Side.

BIRCH MILLWORK, METAL-FRAMED GLASS WALLS, AND PERFORATED METAL CEILING PANELS HIGHLIGHT THE KIT OF PARTS.

To open up floor plans, new interior spaces are expressed as freestanding elements. Metal-framed storefront walls fitted with transparent and translucent glass allow daylight to penetrate from original windows into each station's core. Barnlike sliding wood doors can close off sleeping and lounge areas and also give firefighters a wide berth when quickly gearing up to head out to emergency calls.

A standardized palette of durable materials replaces aging plaster, wood, and vinyl surfaces. The new palette includes ground-faced concrete block, stainless-steel panels, maple and birch plywood millwork, and floating perforated-aluminum ceiling panels. New maple flooring

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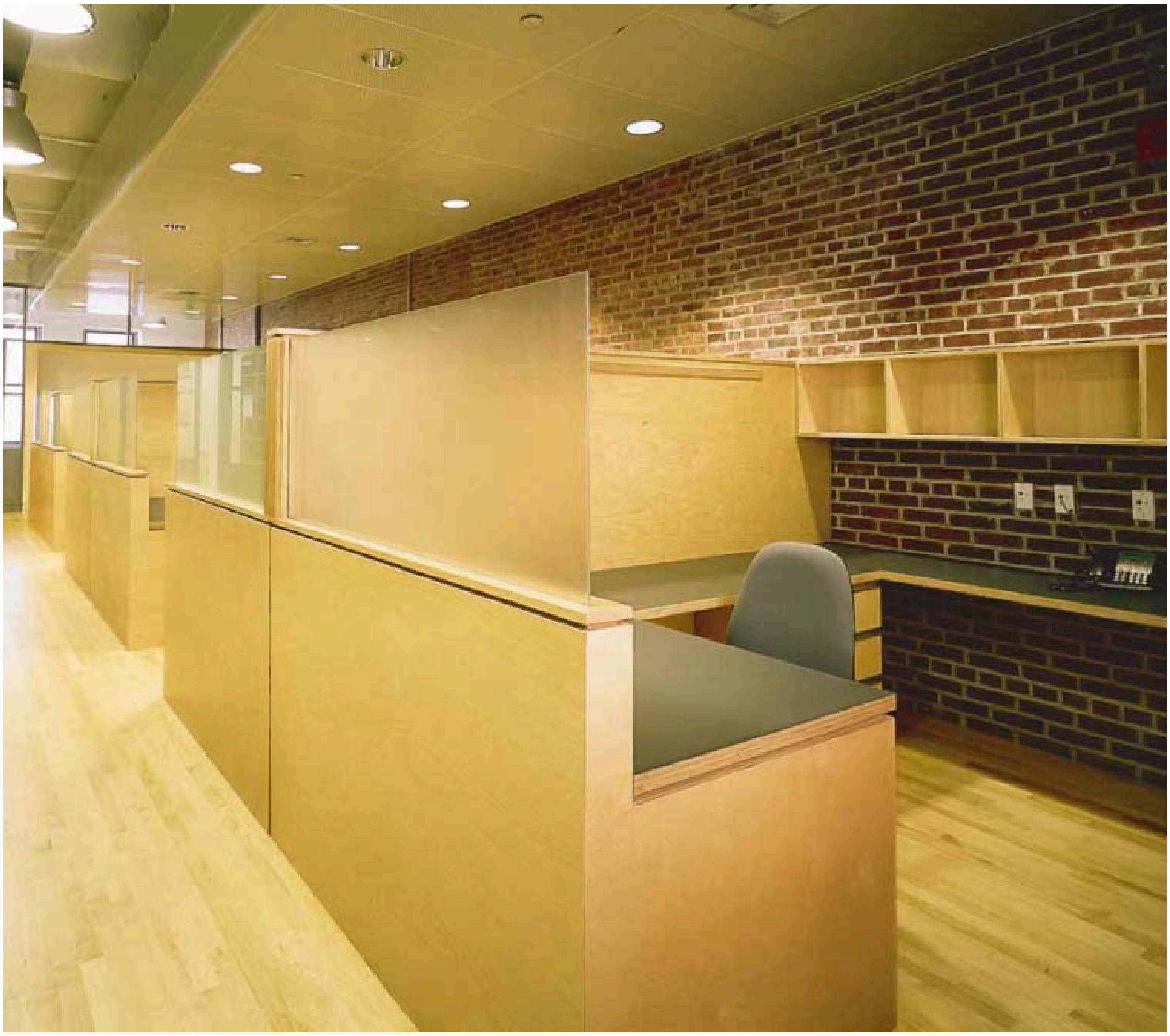
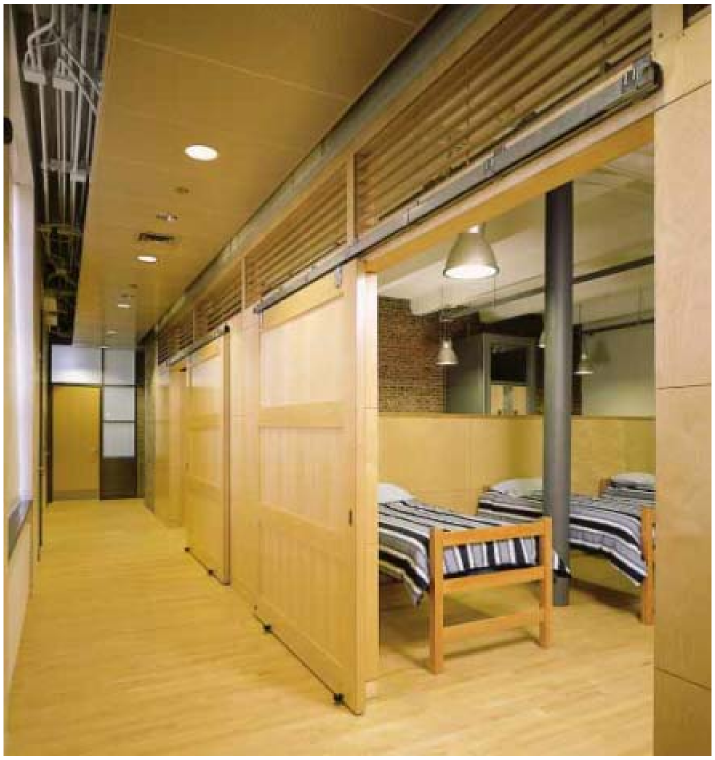


Custom workstations at Ladder Company 25 feature maple millwork and translucent partitions (right). Without a furniture line item, the built-ins were part of the construction budget. Sliding doors front the reconfigured sleeping areas (below).



was installed on upper floors, while nonskid porcelain tile with the look of granite outfits new kitchens and bathrooms. In some instances, auxiliary outdoor space has been drafted to accommodate outdoor grills.

Freestanding furniture was not part of the renovation budgets, so Prendergast Laurel loaded generous built-ins into the construction funding. Custom workstations in the offices feature handsome birch plywood cabinets and cubicles. Streamlined bookcases and banquettes outfit lounges and communications stations. Although a recent tour revealed that some firefighters have begun to bring back their treasured Barcaloungers, a palpable pride of place reigns at these five shining new stations. ■

Project: *Firehouses, New York City*
Architect: *Prendergast Laurel Architects—David W. Prendergast, Deborah Laurel, partners in charge; Christoph Harter, project architect; Chris Heintzen, Joe Polowczuk, Justin Deabreu, Tony Valadez, Stefan Trosdorf, Nazia Parvez, Tao Sule, Kara Mueller, Nancy Choi, project team*
Engineers: *Robert Silman Associates (structural); Atkinson Koven Feinberg (mechanical and electrical); Mottola Rini Engineers (mechanical and electrical)*

Sources
Paints, stains: *Benjamin Moore; Hammerite*
Laminate: *Formica*
Solid surfacing: *Corian*
Light fixtures: *Delray*

For more information on this project, go to Interiors at **www.architecturalrecord.com**.

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Shim-Sutcliffe adapts a historic distillery to create Toronto's contemporary **Corkin Shopland Gallery**

By Barbara Dixon

It's rare when a contemporary art gallery ventures beyond the standard white box to address a varied curatorial mission; rarer still when its interior landscape adapts a historic landmark with a character as compelling as the art and photography on display. For the new home of the Corkin Shopland Gallery in Toronto, Shim-Sutcliffe Architects has gracefully carved a sculptural space from the heavy brick massing of a 19th-century distillery. Infused with daylight and a series of unfolding volumes, the gallery offers intriguing sight lines through a procession of rooms to heighten the art-viewing experience.

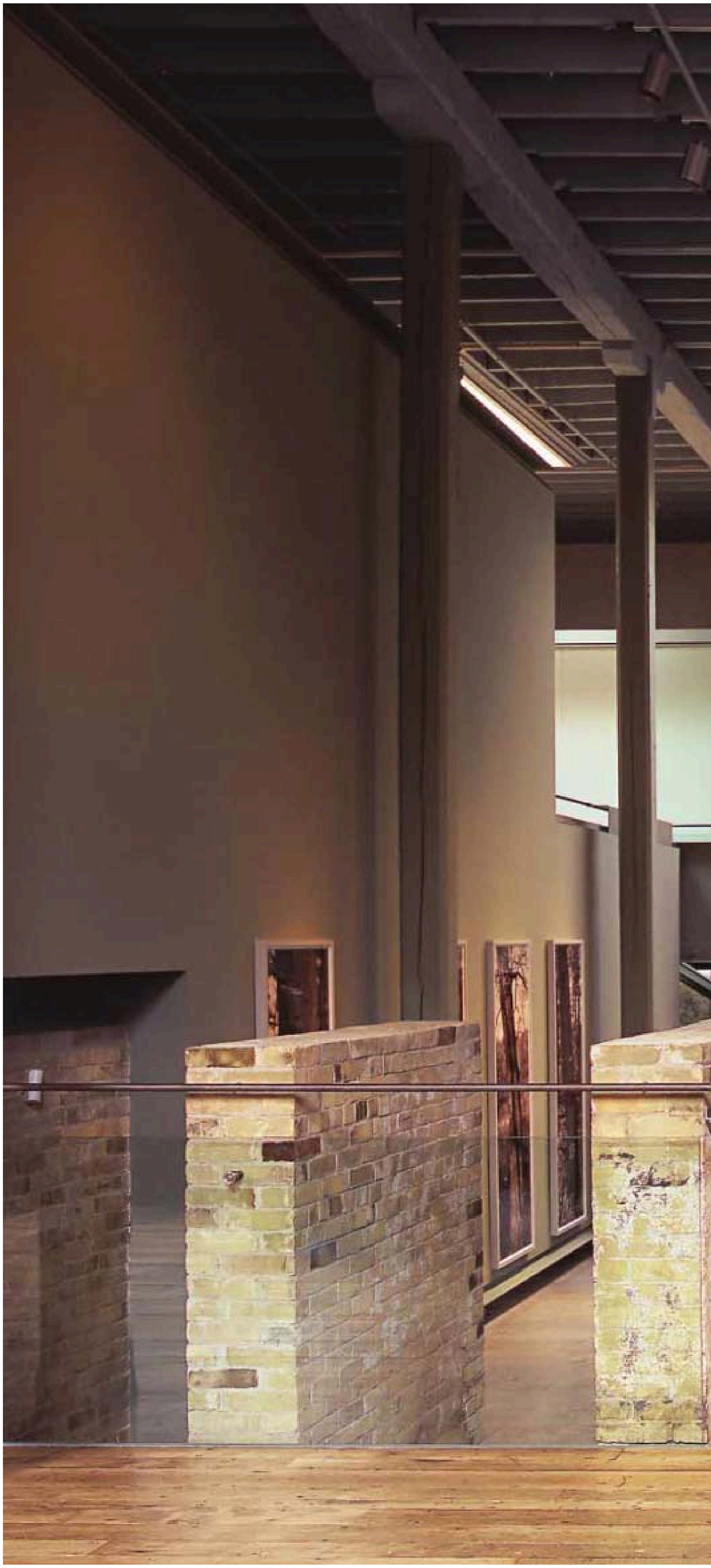
For more than 25 years, gallery co-owner Jane Corkin has showcased vintage art photography. She teamed with partner Martin Shopland to expand the gallery's focus, and now presents work by emerging artists as well as a wide range of decorative objects that date as far back as the 12th century. "The client's mandate was to create a range of spaces of different volumes to allow the greatest curatorial latitude possible," says principal architect Brigitte Shim.

Providing the frame for the gallery's far-reaching exhibitions, which can range from intimate photographs by Eugene Atget to large-scale mixed-media works by Robert Rauschenberg, is a 6,000-square-foot brick building in the city's booming Distillery District. In the past several years, the 16-acre downtown neighborhood has undergone a $20-million rehabilitation to become Toronto's premier arts and entertainment zone. The gallery's Pure Spirits Building was built in 1832 as a gristmill and later housed the immense vats of the Gooderham and Worts Distillery, the largest in the British Empire. For a time in the 1990s, the site became a popular sound stage for film production.

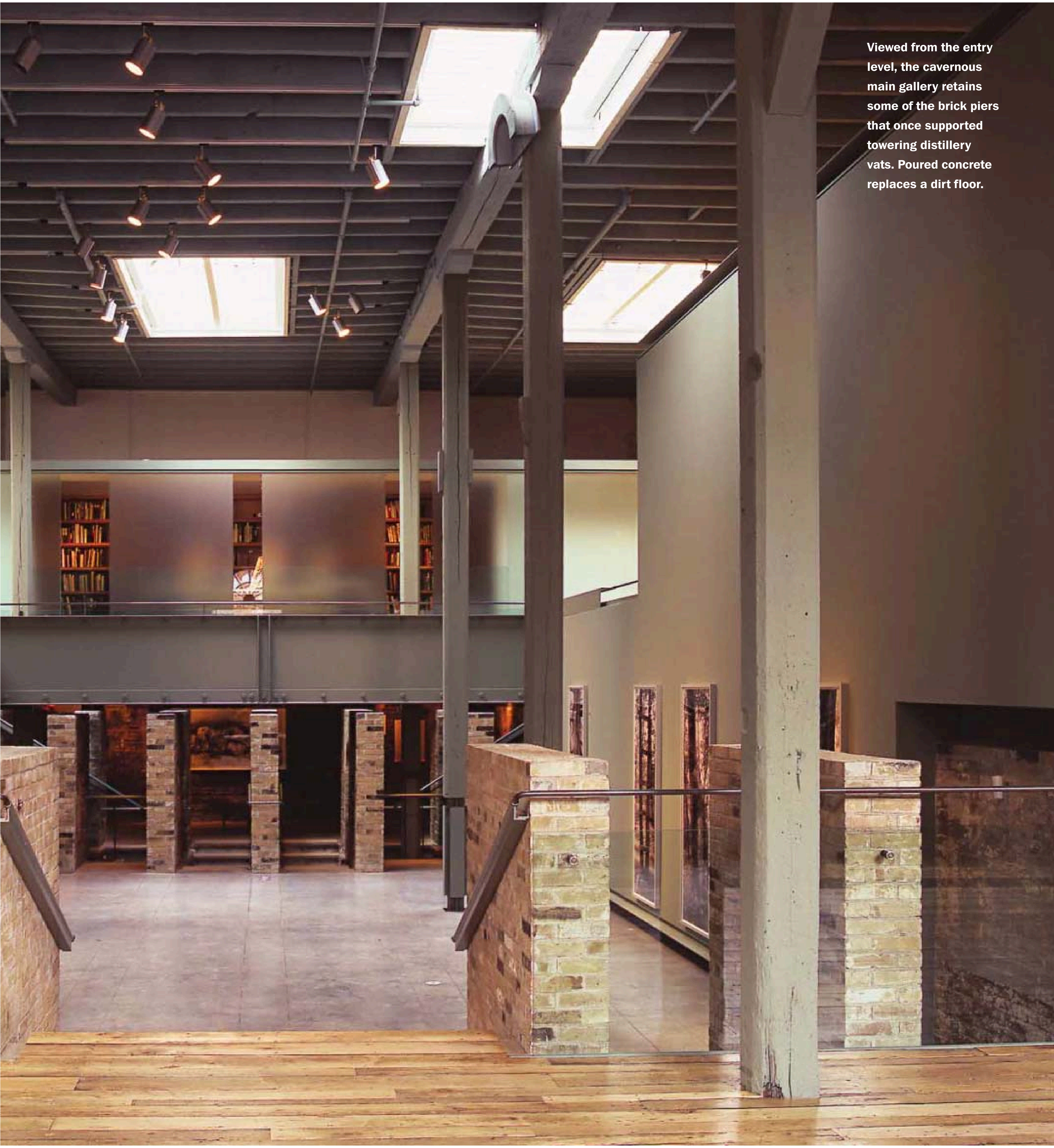
By removing a wood floor added by previous tenants, Shim and partner Howard Sutcliffe uncovered a network of long brick walls set 3 feet on center, which supported the vats used in the distilling process. "The brick piers were not structural elements of the building itself, but served as the 'scaffolding' for the 16-foot-tall vats," Shim says. "We removed most of them to create a vast, double-height main gallery space, but retained some on either side and in smaller spaces to honor the

Barbara Dixon is a Toronto writer and the acting editor in chief of MyHouse.

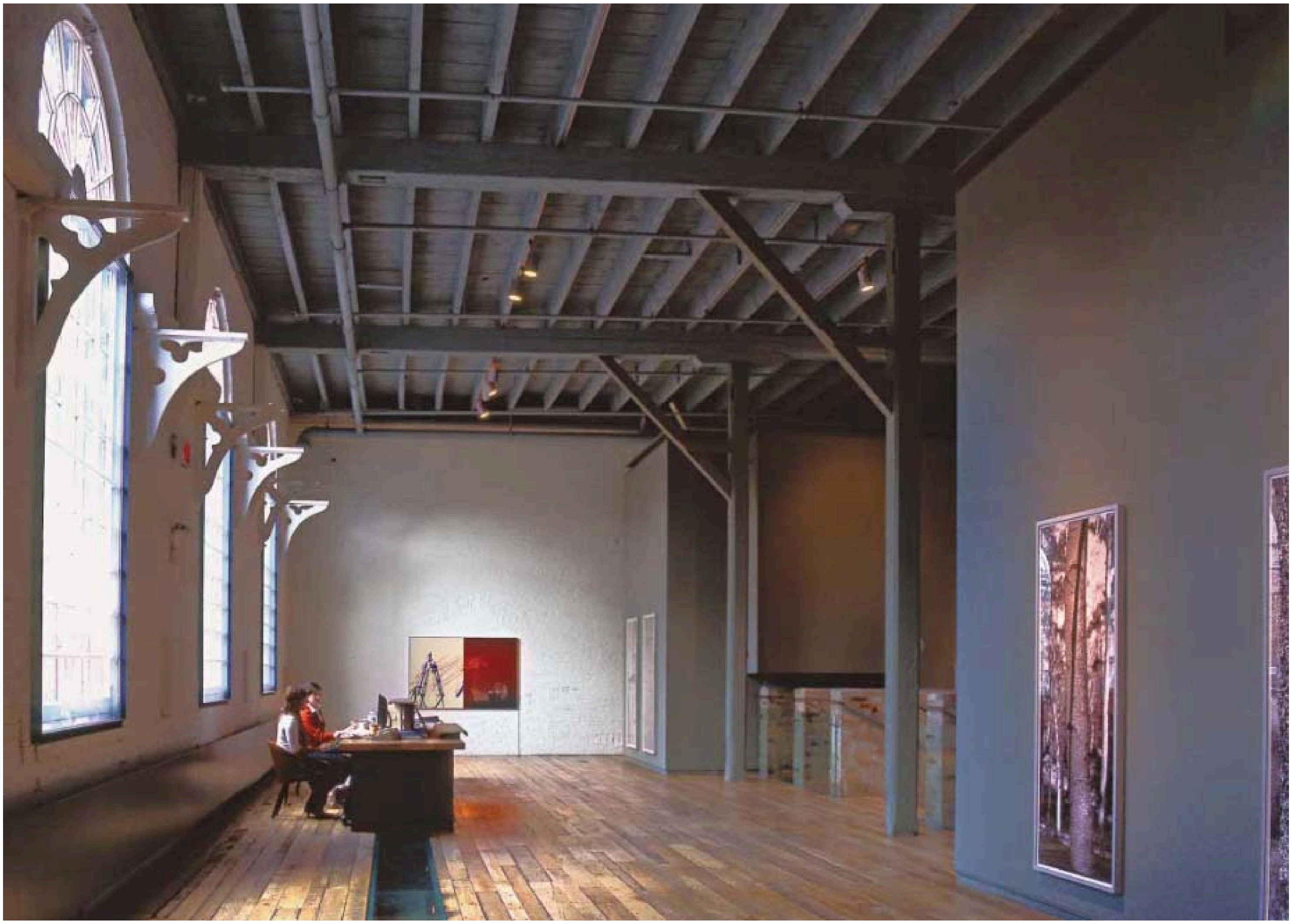
Project: *Corkin Shopland Gallery, Toronto*
Architects: *Shim-Sutcliffe Architects—Brigitte Shim, Howard Sutcliffe, principals; Denise Haradem, project architect; Betsy Williamson*
Project manager: *Eisner-Murray—Vic Furgiuele, project supervisor*
Engineers: *Blackwell Engineering (structural); Toews Engineering (mechanical); Dynamic Designs and Engineering (electrical)*
Consultants: *ERA Architects (heritage); Suzanne Powadiuk Design (lighting); Leber Rubes (code)*

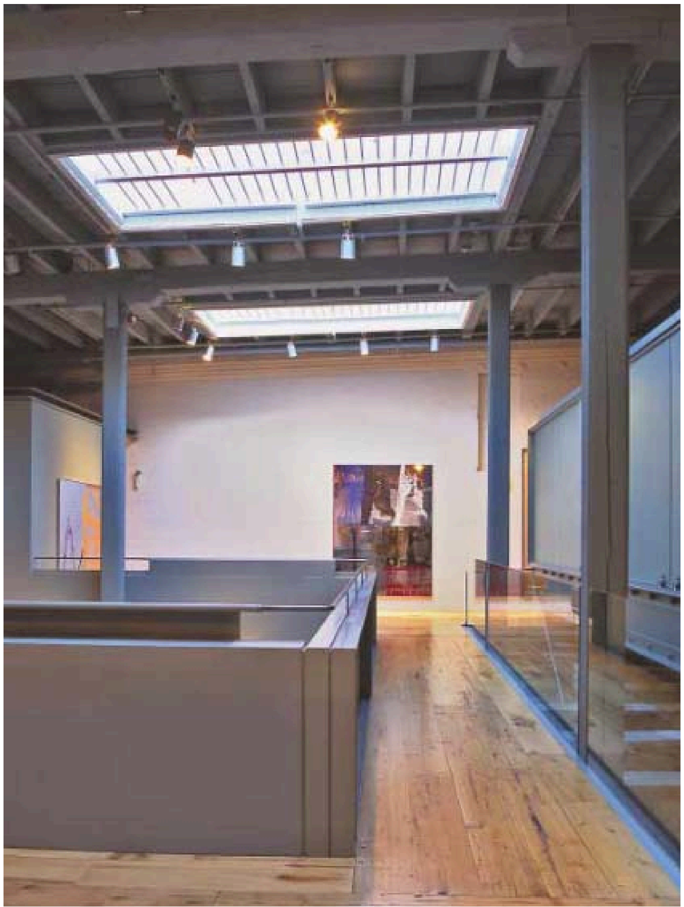


PHOTOGRAPHY: © JAMES DOW



Viewed from the entry level, the cavernous main gallery retains some of the brick piers that once supported towering distillery vats. Poured concrete replaces a dirt floor.





The gallery's reception desk sits in front of three original Palladian windows (above). Old-growth wood flooring was removed, refurbished, and relaid. Restored skylights illuminate the upper-level galleries (right).

historic function of the building." Poured concrete replaced the existing dirt floor. The architects incised the concrete with outlines of the removed brick piers, a further pentimento of Pure Spirits.

The building envelope is landmarked, so the architects restored the existing brick walls, Palladian windows, and skylights. Old-growth pine and maple floorboards were removed, remilled, and reinstalled; some of the wood became risers on new staircases. Existing structural wood columns are now supported by new metal bases, forming an intersection of old and new.

THE GALLERY BALANCES VAST SPACES WITH MORE INTIMATE CHAMBERS, ALL INFUSED WITH A SENSE OF HISTORY.

To create varied volumes within this big box, the architects designed a U-shaped enclosure to surround the 25-by-35-foot main gallery. The east and west walls are drywall painted a gray-green to complement both vibrant paintings and black-and-white photography on

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Project: Museum of Modern Art, New York, NY
Architects: Yoshio Taniguchi and Associates and Kohn Pederson Fox Associates
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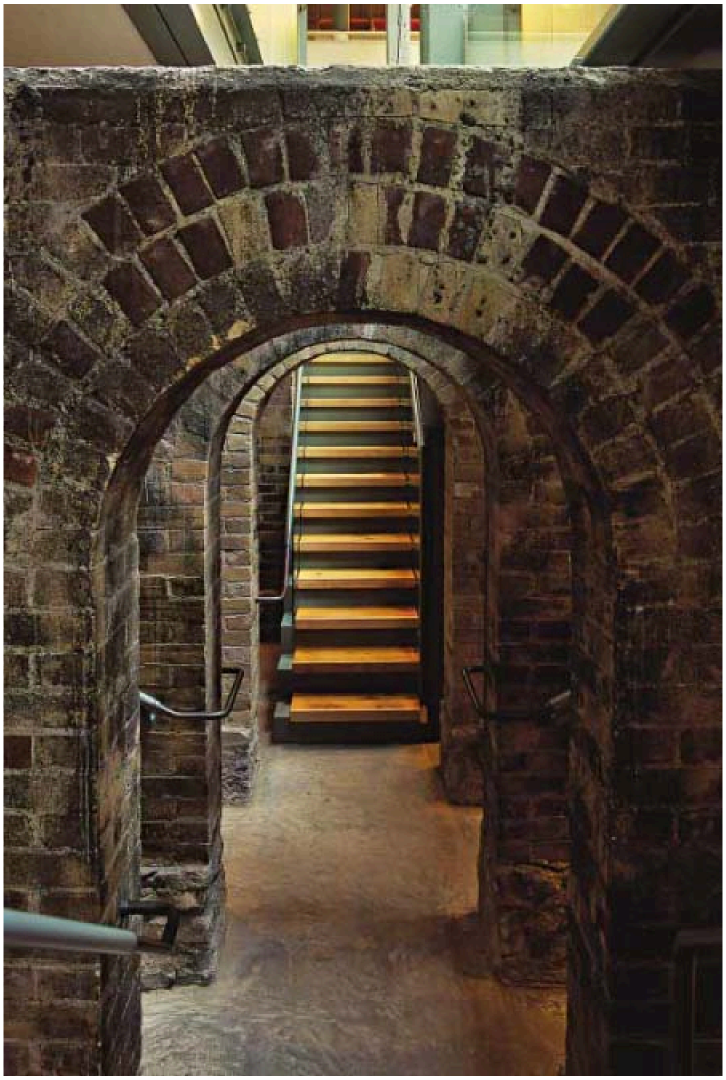

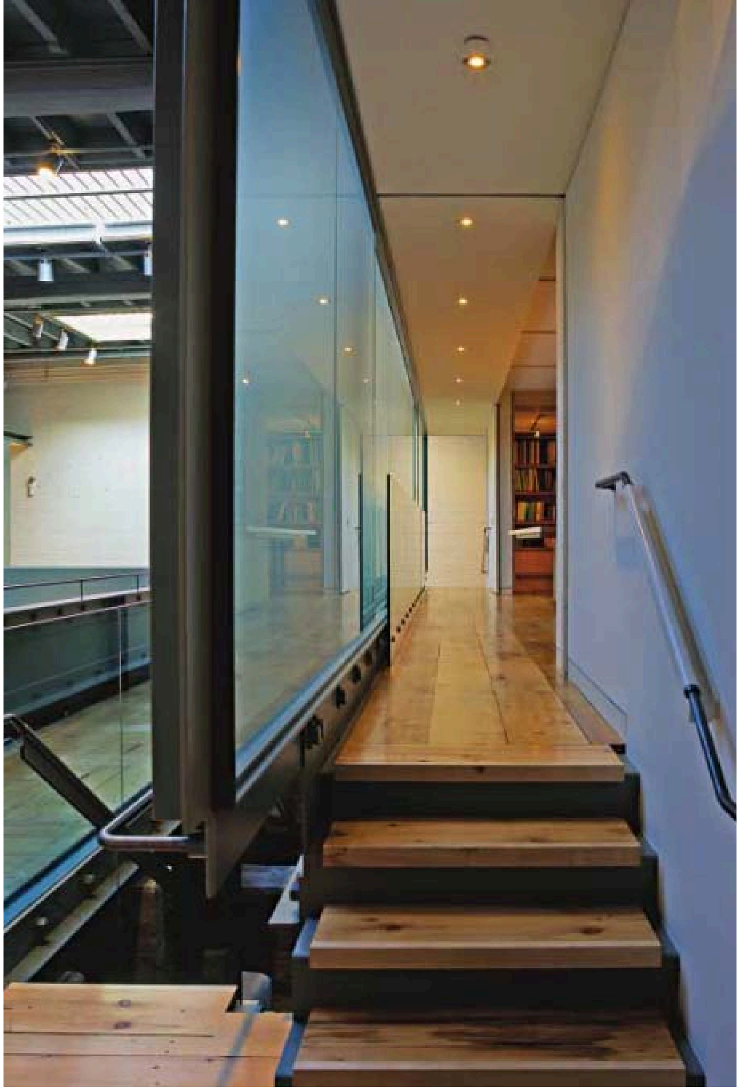

A new steel staircase with recycled wood treads is centered between massive brick archways to heighten the perspectival experience for gallerygoers (left). The hallway to the library (above) is a "backstage" zone.

display. The walls mask HVAC and electrical systems, and enclose private zones for back-of-house functions on the first and second levels. To reinforce the idea that these are new architectural forms dropped into a historic space, the walls are topped by metal channels and stop short 5 feet below the wood-framed ceiling.

South of the main gallery volume, patrons pass through intimate, brick-lined rooms that evoke the feeling of meandering through ancient catacombs. "This is the perfect place to display smaller-scale art or decorative pieces," Corkin says.

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Bracketing the smaller galleries are two steel-and-wood staircases, which are centered within the original brick archways. The mezzaninelike upper level on the building's southern edge contains a library filled with art and photography books. This loftlike room is fronted by a steel bridge that connects to galleries on either side. Sliding, sandblasted-glass panels can close off the library from the main gallery below; they also serve as a rear-projection screen for multimedia installations that can be viewed from the main floor.

"The gallery's design is about layers," Shim says. "When visitors first arrive, they think they see the entire gallery at once. Then the layered volumes begin to unfold, exposing intimate galleries beyond the main double-height room. From the vantage point of the entry platform, the steel bridge appears to be supported by the brick piers. As you move down the stairs onto the main level, it then appears to float in space." Both intimate and vast, the precise juxtapositions of scale and form have distilled a robust industrial space into a refined vessel for high art. ■

Sources

Wood floors: *Barwood Flooring*

Concrete floors: *Quality Marble and Stone*

Metalwork: *Khanadian Custom Metal Fabricators*

Ironwork: *Tremonte Manufacturing*

Millwork: *MCM 2001; Two Degrees North*

Masonry: *Vame Enterprises*

Doors, hardware: *Trilliam Architectural Products*

Paint: *Benjamin Moore*

Glazing: *European Glass and Mirror*

For more information on this project, go to Interiors at **www.architecturalrecord.com**.

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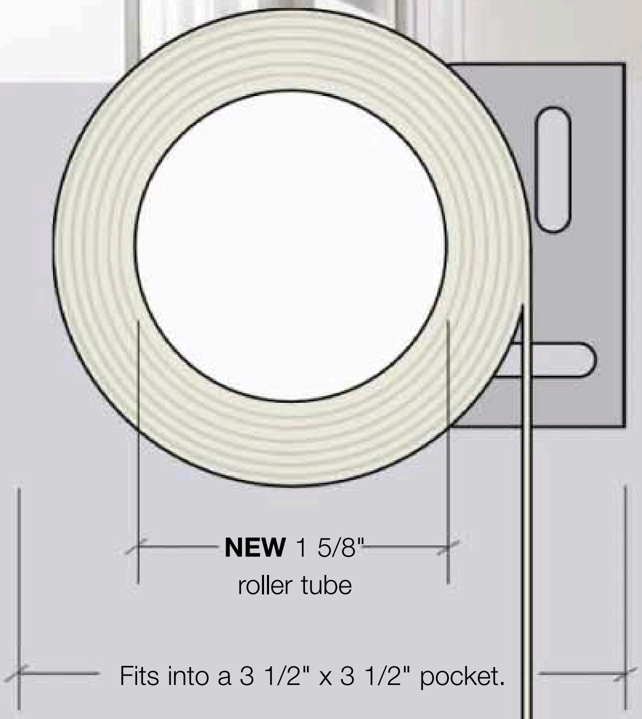

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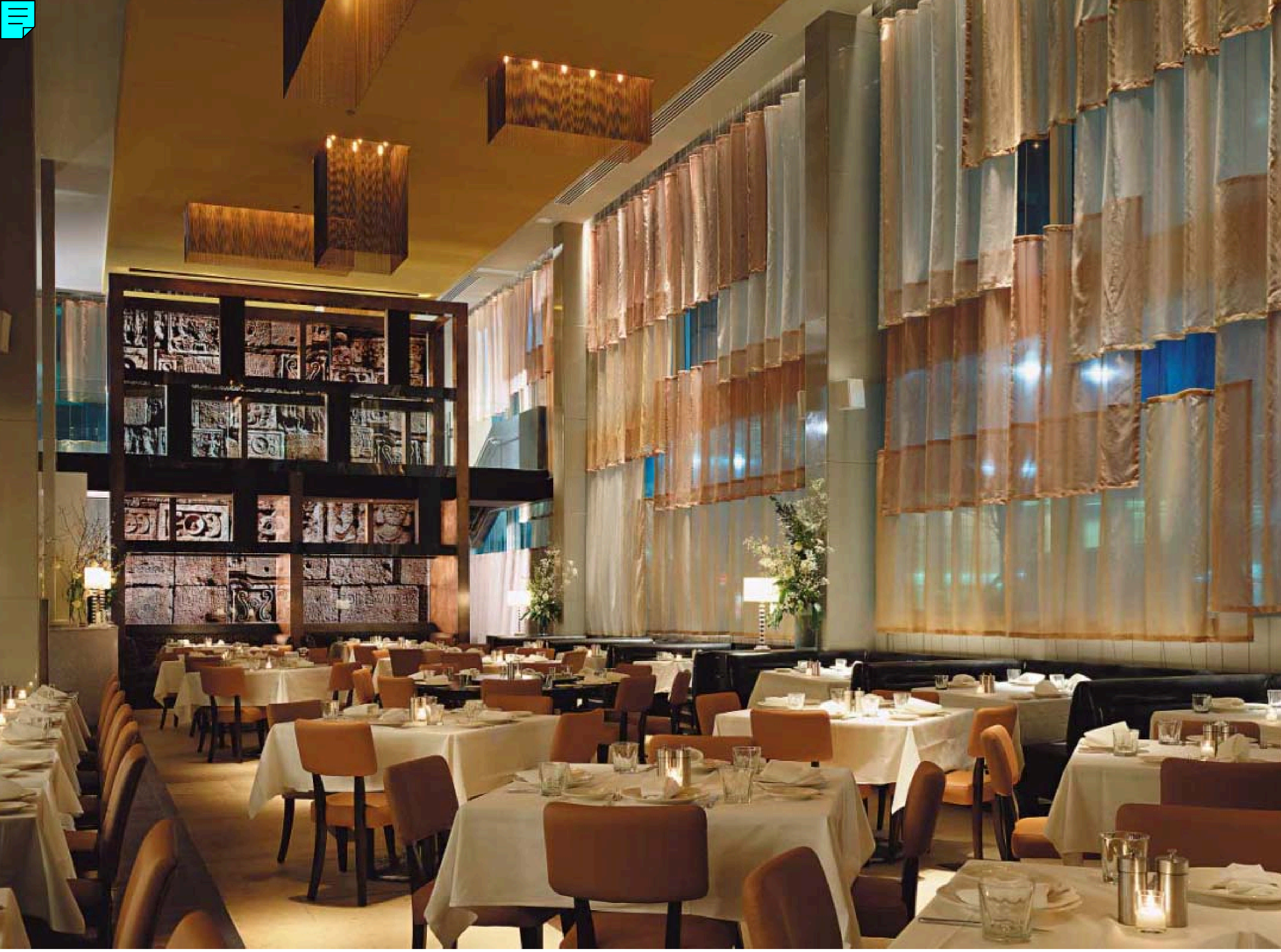
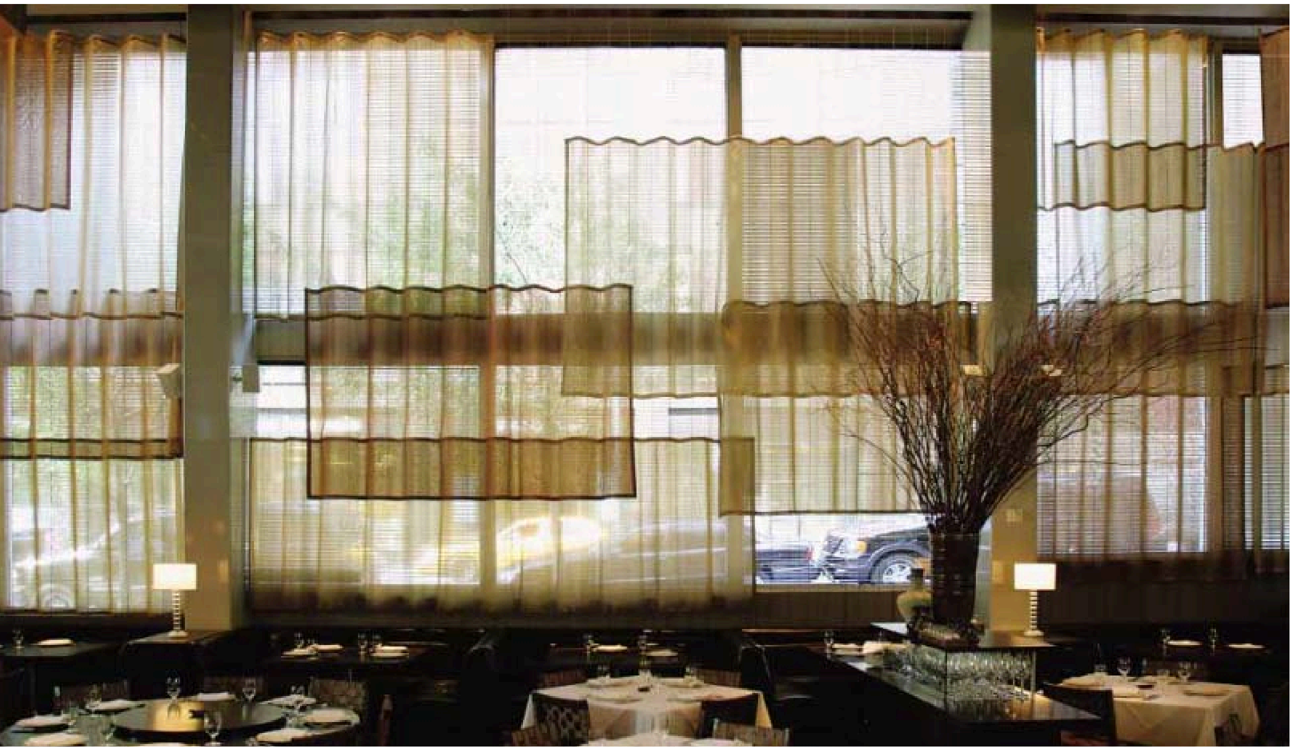




At the Manhattan restaurant called English Is Italian (formerly Tuscan Steak), overlapping sheer curtains hang from vertical strands of ball chain (above and left). Each curtain panel is double-sided, a different color on each side. In the Viñoly residence (opposite), box-pleated, diaphanous curtains cascade from a custom stainless-steel cable system. With parachute-like detailing, their fullness also masks cast-iron radiators.

Architectonic draperies by the **Mary Bright Studio** give new meaning to the phrase "curtain wall"

By William Weathersby, Jr.

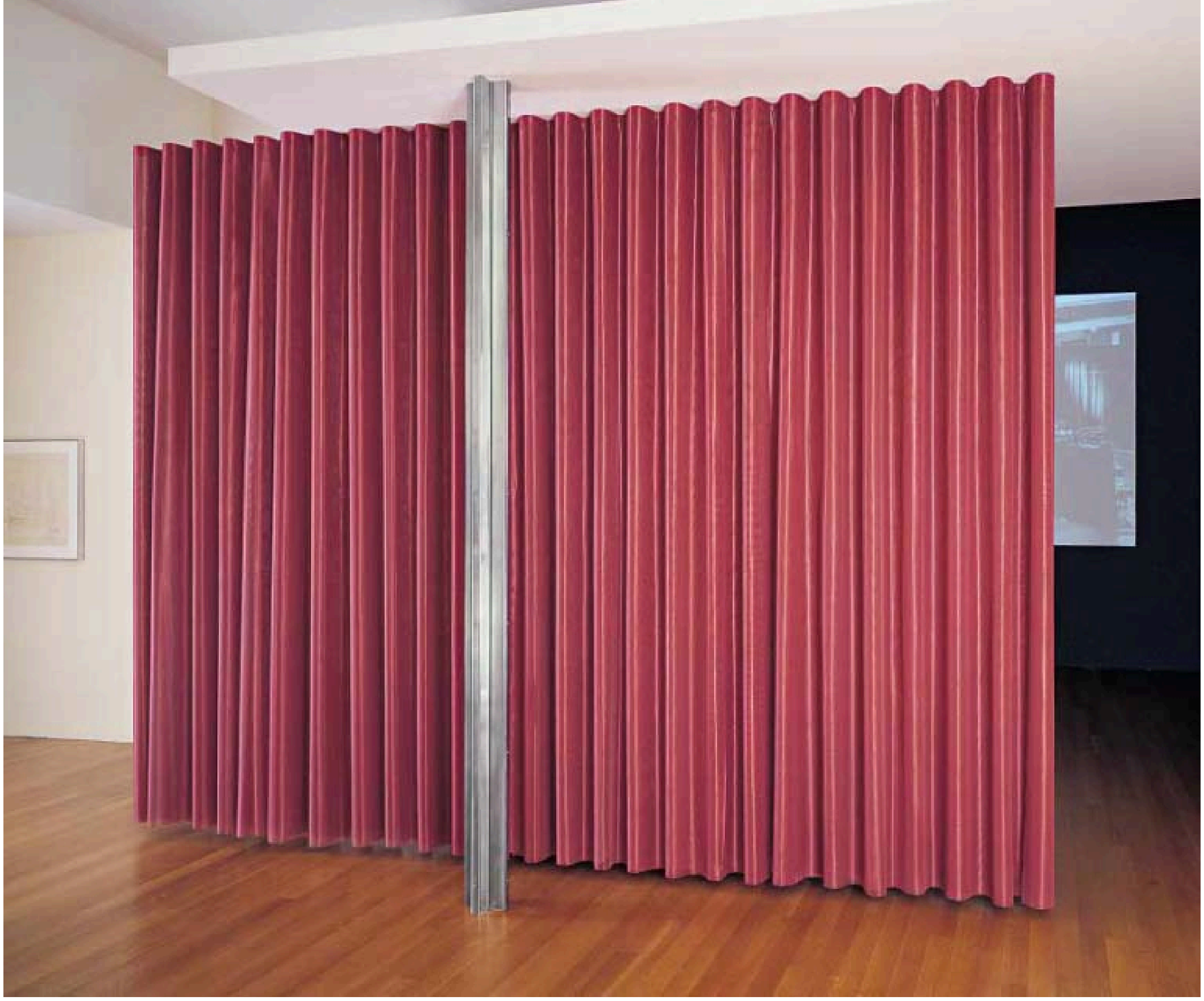
I respect people who hate curtains," the late designer Mary Bright was fond of saying. She was probably counting among that crowd most architects, who have the notorious reputation of hating any hint of draped fabric clouding the view of their pristine curtain walls (particularly in architectural photographs—you know who you are). But before she died of cancer in November 2002 at the age of 48, Bright had turned the trade of curtain-making into an architectonic art. Shaping natural fabrics like linen and burlap—along with unorthodox materials such as corrugated paper, metal mesh, rubber, or leather—into layered screens or tailored folds, she employed drapery as a way to explore the edge between interior and exterior space.

Recalled fondly by many as a kind of madcap genius of window covering with a penchant for quips and comic mugging, the Edinburgh-born Bright began her eclectic New York career as a milliner in the East Village. After an initial invitation by interior designer Alan Buchsbaum to design a voluptuous 60-foot curtain for the loft of actress Ellen Barkin in 1983, she went on to build a roster of celebrity clients, such as Bette Miller and Lauren Bacall. Soon she was attracting architectural clients, including Smith-Miller + Hawkinson; Diller + Scofidio; Hanrahan Meyers; Christian Liaigre; and ARO. Museum of Modern Art curator Terry Riley, who hired Bright to design drapery panels for the 2001 Mies van der Rohe exhibition, cited her "poetry of building" and the beautiful outcome of her "strange and obsessive love" for tailoring.

Carrying on the designer's legacy today at Mary Bright Studio on Lower Broadway in Manhattan is her husband, principal David Paskin, collaborating with designer Erik Bruce. "Mary was an irreplaceable original," Bruce says. "She liked to say that sewing curtains was like swimming laps. There was a balance of grace and effort involved to cover great lengths. Yet artistically, she loved the notion of repetition."

Bruce, who has an MFA in theatrical production and began working with Bright in 1998, says the studio honors her notions of tailored details, among them hand-stitched seams, cascading folds of fabric, and cufflink-style hardware treatments. Yet don't call this curtain couture. "We're creating new work that still speaks in Mary's vocabulary," Bruce

PHOTOGRAPHY: © PETER PAGE (OPPOSITE, TOP) DIETER JANSSEN (THIS PAGE AND OPPOSITE, BOTTOM)



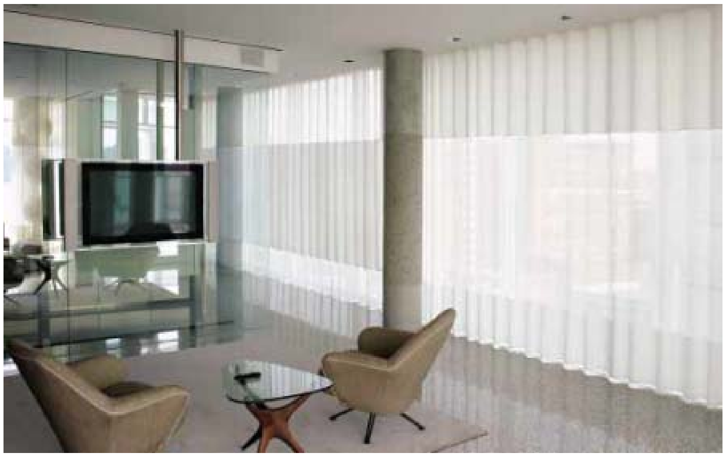
For a MoMA exhibition, an original column from Mies's Barcelona Pavilion is set in front of a vibrant curtain masking a video viewing room (left). In an apartment in Richard Meier's Perry Street building, the drapery's horizontal bands create a clerestory effect (below.)

says, "but it's never been about drapery as a center-stage decorative statement in itself. It's a level of design that complements and interacts with the architect's own intent."

Architects seem to welcome the design team's deft ability to fashion soft materials into vertical surfaces that manipulate light and views while at the same time speak inwardly to the rooms they border. In an apartment designed for contemporary art collectors in one of Richard Meier's new Perry Street towers, for example, interior architect Steven Learner enlisted Bruce to create draperies that wrap windows on three sides. Though the views of the Hudson River are spectacular, the bright sunlight reflected off the water could have overwhelmed the living spaces at points during the day. With collagelike layering, the monochromatic draperies combine sheer fabric with horizontal bands of two opaque textiles set at varying heights. As one moves through the space, views and light are both obscured and revealed; the translucent sections function like clerestories translated to fabric. Drapery bands also align with textured bands that rim the space's structural columns, creating a dialogue.

For a downtown apartment Diana Viñoly designed for herself and her architect husband, Rafael, luminous veils of parachute cloth filter light into the loft while seeming to melt into the white walls and ceiling. Billowing yet unfussy, the curtains are the the kind of calming detail that might actually keep one from ever wanting to pull them back.

"With many drapery companies, the 'design' is mainly in the fabric selection," notes Paskin, "worked up with standard patterns and details. We are a design/build shop that takes into account every element of the curtain to make it site-specific." Indeed, the team's discussion about attaching a drapery to a custom-forged rod can launch a litany of techniques involving grommets, clips, laminated rings, even twine. At Mary Bright Studio, the curtain still rises on windows with a point of view. ■



Project: *English Is Italian (formerly Tuscan Steak)*
Architect: *Jeffrey Beers International*

Project: *Viñoly Residence*
Designer: *Diana Viñoly*

Project: *Barcelona Video Theater, MoMA*
Designer: *Proun Studio*

Project: *Perry Street Residence*
Architect: *Steven Learner Studio*

Sources
Custom drapery design and fabrication: *Mary Bright Studio*
Fabrics: *Pollack Studio (English Is Italian); white nylon ripstop parachute cloth (Viñoly Residence); Knoll Textiles (Barcelona Video Theater); Bergamo; Rogers & Goffigon; Chapas Textiles for AM Collections (Perry Street Residence)*

For more information on these projects, go to Interiors at **www.architecturalrecord.com**.

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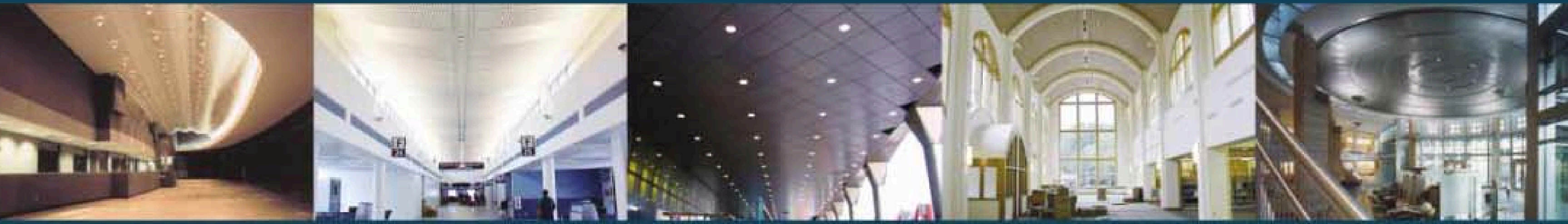

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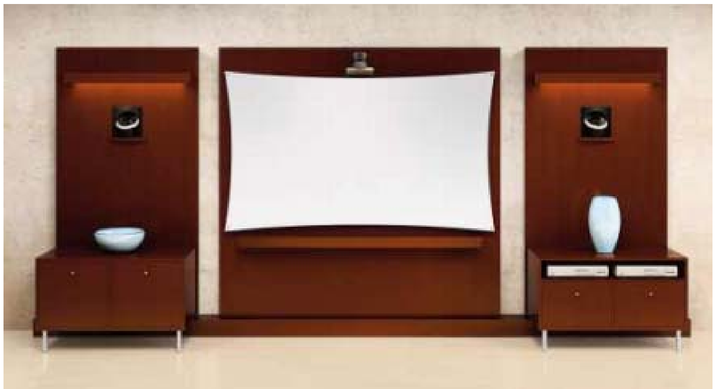
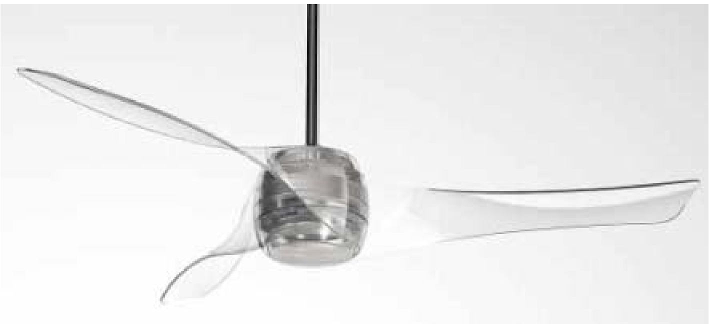
▼ Presentation canvas

Mural is a highly flexible wall system designed to support a variety of presentation formats, including plasma screens, projection systems, videoconferencing cameras, sound systems, CPUs, and laptops. It also works well for simple dialogue presentations that use tackable surfaces, display/presentation shelves, whiteboards, and paper. Mural has a system of bases and thin, vertical structures that offer a range of configuration combinations. Nucraft, Grand Rapids, Mich. www.nucraft.com **CIRCLE 202**



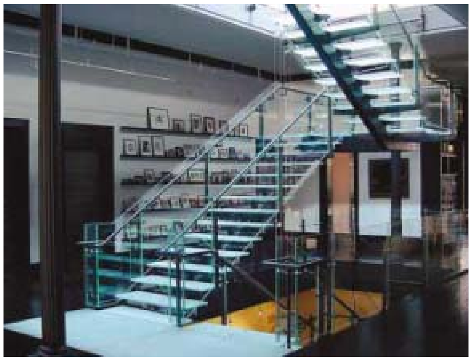
► Flowing glass panels

Artwork in Architectural Glass (AAG) supplied cast-textured, colored, bent, and tempered glass panels for the new Titan Corporation headquarters in Annapolis Junction, Maryland. AAG's Rainfall and Waterwall textures were utilized in ⅜" blue and ⅜" green panels throughout the lobby. The tempered panels are nested together, one directly in front of the other, with alternating colors and textures to create a flowing water effect. Artwork in Architectural Glass, Newport Beach, Calif. www.aag-glass.com **CIRCLE 204**



▲ Bodiless fan design

Artemis, the latest ceiling fan from G Squared Art, does not have a "body"—the blades themselves wrap around the motor. The blade pitch is designed with pronounced steep angles near the center of the fan, tapering off to a gentle slope at the blade tips. Featuring a halogen bulb, the fan comes in translucent, mahogany, maple, and pearl white finishes. A wall-mounted, radio-frequency remote control is included. G Squared Art, Avila Beach, Calif. www.g2art.com **CIRCLE 201**

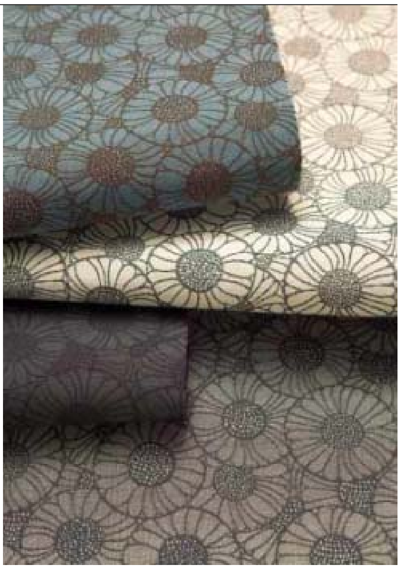


▲ Light and airy stair

Mison Concepts recently completed this staircase for a three-story loft in New York City's Tribeca district. In order to allow the light from the loft's 400-square-foot skylight to penetrate all of the floors of the home, the client commissioned Mison Concepts to design a glass staircase that maintained the industrial feel of the space yet remained transparent and light. The three-story, single stringer, cantilevered stairs combined blackened stainless-steel hardware, a blackened steel structure, clear glass, and fitted glass to achieve the desired effect. Mison Concepts, Hicksville, N.Y. www.mison.com **CIRCLE 203**

► 20th-century fabrics

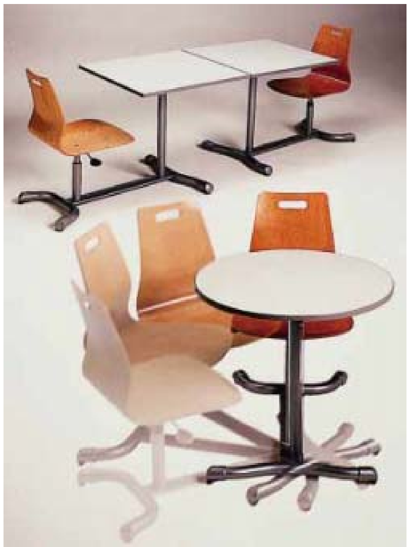
Maharam continues to explore textile designs of the early 20th century with Orakelblume (right) by Koloman Moser (1901) and Design 7208 by Josef Hoffmann (1909). The stylized daisies in Orakelblume illustrate Moser's talent for juxtaposing geometrical shapes with whimsical motifs. The 55"-wide cotton/rayon blends join a collection of reeditions from designers including Alexander Girard, George Nelson, and Verner Panton. Maharam, New York City. www.maharam.com **CIRCLE 205**

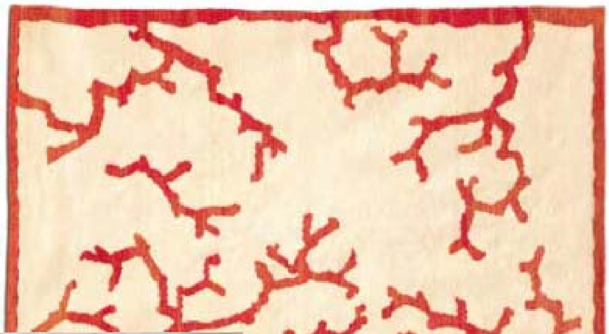


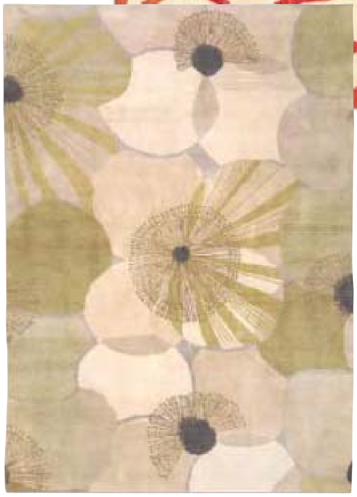
Interiors Products Category

▼ A twist in classroom furniture

Recognizing the trend for instructors to use all four walls of a classroom, KI developed 360° classroom furniture, a new line of desks, tables, and chairs. Designed with students, teachers, and janitorial maintenance in mind, 360° improves space utilization and encourages teacher and student creativity. Often students strain to see their teacher; with 360°, the entire desk can rotate completely, enabling instruction from any point in the room. Students can set their seat height to their preference, and a seat swivel allows students to track the teacher throughout the room. The line's fully adjustable frames can be configured to accommodate young children to adults. KI, Green Bay, Wis. www.ki.com **CIRCLE 206**

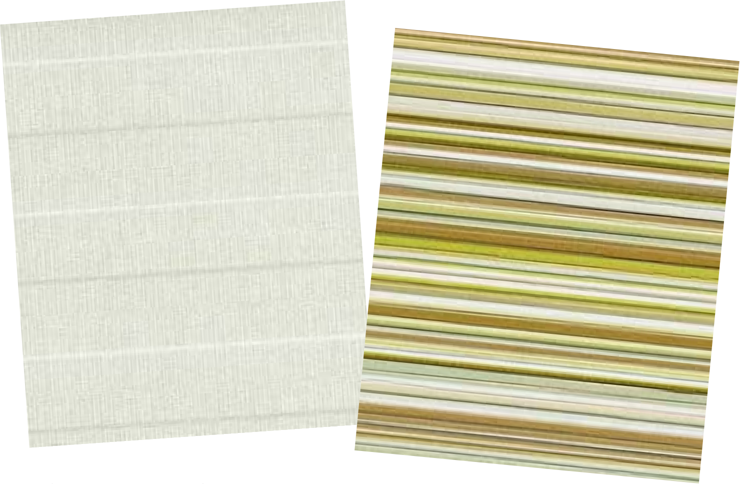






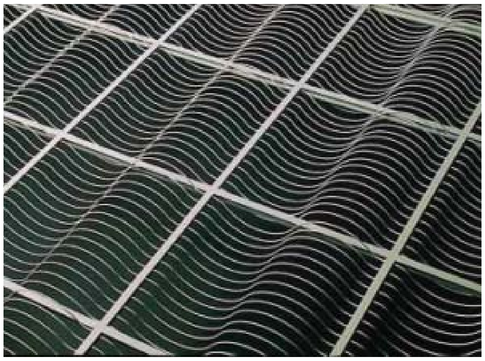
▲ Inspired by nature

Founded in 2000 by master weaver and artist Joanna Michalowicz, Asha carpets are as much about texture as they are about design. The carpets celebrate contemporary design, while at the same time they honor the heritage of the antique carpet tradition. Asha's latest designs, Coral (above) and Poppies (left), demonstrate these signature features. Available in flat weave, hand-knotted, or Velaubu technique, Coral's organic pattern stretches from the rug's uneven border across a solid background. Poppies, a bold pattern reminiscent of sunrays, is available in seven colorways with or without a border, in either a flat weave or hand-knotted design. Asha Carpets, Brooklyn, N.Y. www.ashacarpets.com **CIRCLE 209**



▲ Character-defining lines

Interception (left) and Bandwidth (right), designed by Kari Pei, are the newest additions to Wolf-Gordon's Suite Collection, a line of durable, Type II vinyl wall coverings 52" and 54" wide, respectively, appropriate for corporate, retail, and hospitality interiors. Bandwidth is a modern stripe inspired by Joseph Albers's color theory, available in 10 colorways that span saturated accents to soft neutrals. Interception, with its Tuscan-infused hues, uses scale to transform a large horizontal pattern into a three-dimensional vertical. Wolf-Gordon, Long Island City, N.Y. www.wolf-gordon.com **CIRCLE 207**



▲ Making waves

Wireworks Forms open-cell ceiling system is the latest in open-ceiling design from USG Interiors. Each panel is made from $\frac{3}{16}$" curved steel, robotically welded into wave patterns. Effective in both new and retrofit applications, the panels can be installed either angled upward toward the ceiling or downward toward the floor. The panels are available in high-gloss, powder-coated finishes that are durable and abuse-resistant, as well as in custom colors. USG Interiors, Chicago. www.usg.com **CIRCLE 208**

◄ Ceilings with a conscience

Luxalon Architectural Products utilize more than 70 percent recycled content and minimize factory waste. The metal ceiling systems come in a variety of colors and styles—from linear metal to Open Cell, Planks and Tiles, acoustical baffles, and exterior soffit products—and have no off-gassing or negative effect on interior air quality. The rust-resistant panels are also nonporous, and therefore do not collect mold and mildew. Hunter Douglas, Norcross, Ga. www.hdceilings.com **CIRCLE 210**

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Products Doors & Windows

To say that storm-resistant windows and doors were a hot topic at this year's Builder's Show is an understatement. Alongside other problem-solving introductions, such as an oversize venting picture window, were aisles of products intended to save money, property, and above all else, lives. *Rita Catinella Orrell*

A venting window, and storm-resistant and commercial door options

Marvin Windows and Doors showcased several noteworthy introductions at the International Builder's Show, held last January in Orlando. On the top of the list was the Venting Picture Window, a new product category that combines unobstructed views and cross ventilation. Marvin's exclusive design features a sash that projects 2¼" outward to reveal a screened-in opening that helps vent stagnant air, reduce condensation, and keep out insects. Made of fiberglass-wrapped reticulated foam that resists mold, mildew, and ultraviolet rays, the window's hidden screen surrounds the full perimeter when the window projects outward, allowing air to circulate without obstructing the view. From the outside, the window appears closed at all times, giving clients a sense of security when keeping windows open at night.

On the door side of the business, Marvin has added a line of swinging French doors to its StormPlus line for Impact Zone 3 and Impact Zone 4. The swinging French doors will be offered in rectangle, eyebrow, and half-round shapes, and are available to fit a new, standard 10' rough-opening height.

Marvin has entered the commercial market with a door designed to withstand heavy use, with sturdy, 4½" ball-bearing hinges and beveled meeting stiles to ensure long-term operation. The door meets ADA codes with a bottom-rail height of 11⅜", a net clear opening of 32", and a standard low-profile sill. It is sized to accommodate the nonresidential market with standard heights of 7' or 8' and widths of 3' or 6'. Marvin Windows and Doors, St. Paul, Minn. www.marvin.com **CIRCLE 211**

StormPlus French doors (left); Commercial door (center); Venting Picture Window (right).

Getting a new look for windows or doors, in a snap

Pella also used this year's Builder's Show as an opportunity to introduce its latest offering—Pella Designer Series windows and patio doors. The new collection, available exclusively on Pella Designer Series double-hung, casement, and awning windows, sliding and hinged doors, and transoms, allows users to simply snap out the blind or shade and replace it with a new color.

Available window fashions include blinds, cellular shades, and unfinished wood grilles. The fashions include light-filtering or room-darkening shades and blinds that help alleviate allergy-aggravating conditions, since they remain clean and virtually dust-free between the glass. There is enough space between the glass for both decorative grilles and a blind or shade. The removable grille's exterior matches the exterior cladding, and the grille's interior can be painted or stained to match the decor.

Shades in the line open from the top down, allowing natural light in from the top while covering the bottom of the unit for added privacy. The new series also features cordless operation, so there are no strings to attract children or pets.

Two exclusive Pella screen options enhance the Designer Series. The Pella Rolscreen retractable insect screen, available on casement windows and sliding patio doors, rolls out of sight when not in use and eliminates the need for seasonal screen storage. Pella Vivid View screens are virtually invisible, allowing for a better view and three times the airflow of a traditional screen. Pella, Pella, Iowa. www.pella.com **CIRCLE 212**

Window grilles can be easily replaced by the owner.

Doors & Windows: Storm-resistant

◄ Twice the fiberglass

Jeld-Wen has undertaken a massive R&D effort to create the next generation of exterior fiberglass doors. The new line of Premium fiberglass doors will feature PÜR-Fiber, a technology that has twice the industry standard for fiberglass content (35 percent content versus 10 to 12 percent), making it four times stronger than any other fiberglass door and giving it the strength to stand up to hurricane forces. Thirty-two standard door styles will be offered. Jeld-Wen, Klamath Falls, Ore. www.jeld-wen.com **CIRCLE 213**

► Impact-resistant for cooler climates

The LifeGuard IG line from Weather Shield is ideal for violent-storm-prone, colder-climate coastal areas from Maine to North and South Carolina. The IG products offer LifeGuard's reinforcing features, but with two panes of glass, rather than one, and other energy-efficient features like Low-E^2 glass and argon- or krypton-filled airspace. The inboard panel protects the house from the potential of flying glass from the outboard panel, which is made from ordinary glass. Weather Shield Windows & Doors, Medford, Wis. www.weathershield.com **CIRCLE 215**

▼ Wind-load configurator stands up to the test

The Lewis Bear Company of Pensacola, Florida, took occupancy of its new distribution facility only days before Hurricane Ivan struck. Holmes & Holmes Architects had insisted that even the building's 20'-wide-by-14'-tall exterior doors be up to mandated wind-load requirements. Cornell Iron Works utilized their exclusive wind-load configurator to analyze the specific building requirements and supplied 15 coiling doors that withstood the hurricane's wrath. Cornell Iron Works, Mountaintop, Pa. www.cornelliron.com **CIRCLE 217**

◄ Option with impact

A new impact-resistant option is available for CertainTeed's Bryn Mawr II and New Castle XT lines of vinyl windows. The windows meet wind-borne-debris testing standards of the International Building Code by passing tests ASTM E 1996 and ASTM E 1886 for impact-resistance. The windows are designed with an insulated-glass unit with a laminated piece of glass on the interior that contains a tough layer of PVB for increased safety. CertainTeed, Valley Forge, Pa. www.certainteed.com **CIRCLE 214**

▼ A safer daylighting option

Velux has introduced the Miami-Dade-approved FCM skylight. a curb-mounted, insulated-glass skylight that meets the requirements of the International Building Code/Commercial; International Residential Code; Florida Building Code 2001; and stringent high-velocity hurricane protocols. The FCM skylights work with all sizes of site-built curbs and with the varying thickness of different flashing and roofing materials. Velux America, Greenwood, S.C. www.veluxusa.com **CIRCLE 216**

► Wood-grain finish option

A new simulated wood-grain finish from PGT is available on WinGuard Impact-Resistant windows and doors. The simulated finish, available in a variety of wood grain and stain combinations, is ideal for homes in coastal markets where weather-resistant aluminum frames are preferable to wood. All WinGuard aluminum-framed products are approved by the Miami-Dade Product Control, which enforces the strictest hurricane protection requirements in the country. The products will be available later this year. PGT Industries, Nokomis, Fla. www.pgtindustries.com **CIRCLE 218**

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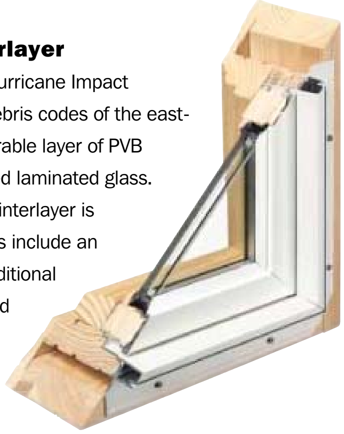
Doors & Windows: Storm-resistant

▲ Tested in the lab, and in the open

Simonton Windows' Product Development Center in West Virginia includes certified test labs that perform in-house and on-site structural, condensation, and thermal testing to help Simonton engineers design windows and doors suited for coastal environments (an air cannon test done to simulate hurricane-force weather conditions is shown at left). In a real life test, only one StormBreaker Plus vinyl casement window in a Punta Gorda, Florida, home sustained minor damage after Hurricane Charley (right). Simonton Windows, Parkersburg, W.V. www.simonton.com **CIRCLE 220**

► Protective laminated interlayer

Vetter Windows and Doors Insulated Hurricane Impact Products meet stringent wind-borne debris codes of the eastern U.S. The product line features a durable layer of PVB bonded between two panes of annealed laminated glass. Should the glass break, the laminated interlayer is designed to remain intact. The products include an out-swing patio door in French and traditional styles, and double-hung, casement, and direct-set picture windows. Vetter Windows and Doors, Mosinee, Wis. www.vetterwindows.com **CIRCLE 219**



◄ Women and children first

Specialty contractor Harmon is providing Orlando Regional Healthcare's new Hospital for Women & Babies with its hurricane-impact-resistant exterior-glazing system. Opening in late 2005, the 11-story, 273-bed facility will feature abundant natural lighting and oversize windows in patient rooms. The hospital's circular design required the glazing team to overclad designated areas to achieve the desired look. Harmon, Golden Valley, Minn. www.harmoninc.com **CIRCLE 221**

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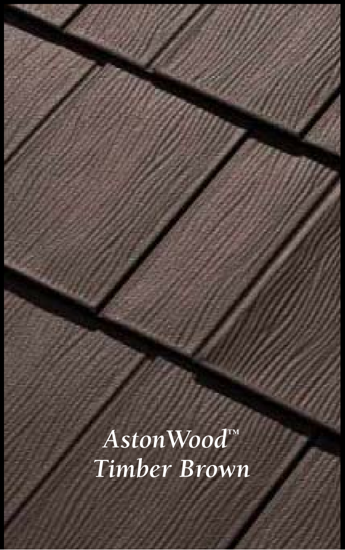

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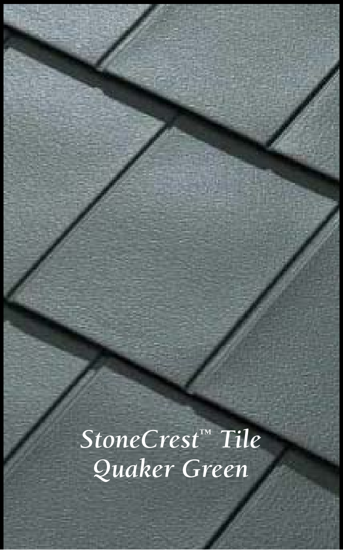

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Doors & Windows: Storm-resistant

► Online tools for coastal projects

Andersen windows with StormWatch protection feature a selection of styles designed to resist the effects of high wind and wind-borne debris associated with coastal storms. The Andersen Design Pressure Estimator and Coastal Product Finder are online tools that help architects find the right fenestration products for coastal applications. The software takes user-supplied information to estimate design pressure requirements, recommend the right Andersen product for those estimated requirements, and provide certified documentation and test reports that aid in gaining building permits. Andersen Windows and Doors, Bayport, Minn. www.andersenwindows.com **CIRCLE 222**

◄ Flashing in a flash

Grace Vycor Plus self-adhered flashing features a cord embedded in the adhesive layer that allows the release paper to split in half. This cord enables proper integration of the flashing with other key moisture-protection elements of the wall. By protecting structures from water infiltration, Grace Vycor Plus reduces the risk of rot and mold development. Grace Construction Products, Cambridge, Mass. www.graceconstruction.com **CIRCLE 223**

► Wind-, debris-, and bullet-safe

GE Advanced Materials has introduced TOR-GARD BAL40 window glazing and framing that passes FEMA 361 Chapter 6 testing for debris-impact-resistance for community shelters. While the exterior surface of the window is glass, the inside is a mar-resistant, GE Lexan polycarbonate laminate sheet. Applications include 911 call centers, police facilities, and emergency rooms. GE Advanced Materials, Brighton, Mich. www.geadvancedmaterials.com **CIRCLE 224**

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Architect: Ellenzweig Associates, Inc.

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► Storage panel system

Spacesaver's new Hang-Glider Pro storage panel system offers an efficient way to store framed art, cultural artifacts, tools, equipment, legal evidence, medical instruments, and a range of other objects. The ceiling-suspended pullout system features the industry's thickest-gage aluminum screen. The specially extruded aluminum track includes a frictionless roller guide trolley system to eliminate vibration, while anti-sway guide wheels in the front and rear further protect stored materials. Spacesaver, Fort Atkinson, Wis. www.spacesaver.com **CIRCLE 225**

▼ Time-worn stone, in a laminate

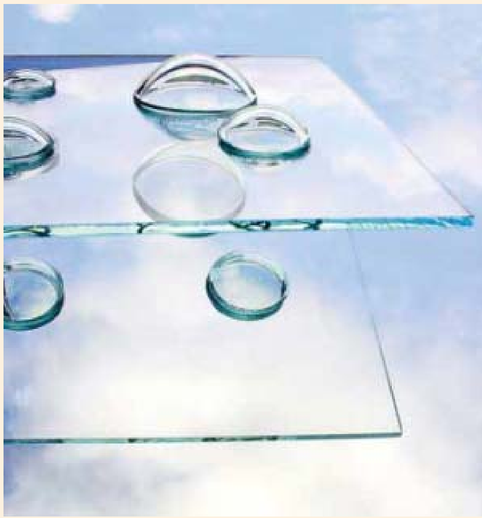
Wilsonart's new Roca laminate series intends to replicate the look of time-worn stone by emphasizing the natural aging and irregularities that occur to surfaces over time. Contrasting with the highly polished looks of granite, marble, and engineered stone, Roca is available in six soft, earthy color combinations with contrasting undertones. Shown here is Antique Roca, featuring layered orange, red, and brown hues contrasted with discreet blue-green accents. Wilsonart, Temple, Tex. www.countertop.com **CIRCLE 227**

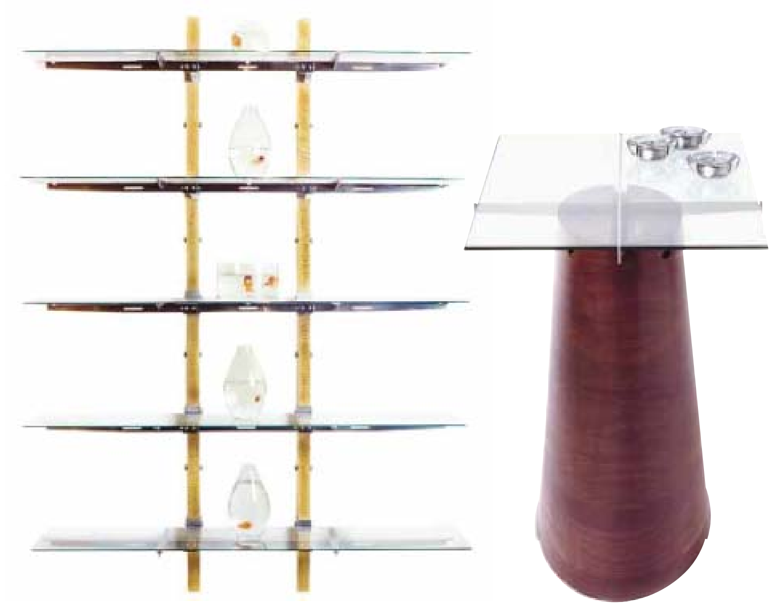
► It's showtime once again

Hart Contracting has completed the exterior renovation of the Wildey Theatre in Edwardsville, Illinois. Constructed in 1909, the three-story masonry building was originally used as a lodge and a theater. As part of a restoration team with Henderson Associates Architects, Hart Contracting focused on details such as matching the grout to exact color standards typical in the early 1900s, and matching bricks that needed replacement to the color, texture, and size of the originals. The building's Vitrolite panels, the sleek glass tile of the '20s and the '30s, were all restored to their original lustrous colors. Hart Contracting, Alton, Ill. www.wildeytheatre.com **CIRCLE 228**

Product of the Month Sphere Glass

Sphere Glass, the latest offering from Nathan Allan Glass Studios, is designed for vertical wall partitions, backbars, side lites, door lites, feature walls, and overhead hanging panels. When specified in a range of background colored panels, the 3D glass is designed with clear spheres to pick up the background color. If clear glass or crystal-clear glass is used as the background panel, colored spheres in light green, blue green, blue, aqua blue, gray, bronze, clear, and crystal clear can be specified. The raised sphere elements are produced in three standard diameters, although larger sizes are possible. As the background panels are safety tempered, Sphere is available for both commercial and residential applications. Currently, the glass is specified in a number of projects, including a Las Vegas casino, several corporate office projects, and a spa for Royal Caribbean Cruise Lines. For one custom project, the Spheres are designed with a 24" diameter and a 4" protrusion. Nathan Allan Glass Studios, Richmond, British Columbia. www.nathanallan.com **CIRCLE 226**





▲ Range of inspirations

Inspired by his experiences in a small American steel town, the islands of Japan, and the Nordic nations of Scandinavia, architect Bailey Heck's highly detailed pieces are made from carefully selected solid hardwoods and surgical-quality stainless steel. Handmade by a select number of experienced craftsmen, only one or two of each design is produced concurrently. The Grace shelf (above left) is a wall-hung shelving unit featuring a delicate steel armature that cradles repositionable glass shelves suspended from wood arms. The Trunk table (above right) features a trunklike base onto which a steel bracket elevates a glass tabletop. Bailey Humbert Heck, New York City. www.baileyheck.com **CIRCLE 229**

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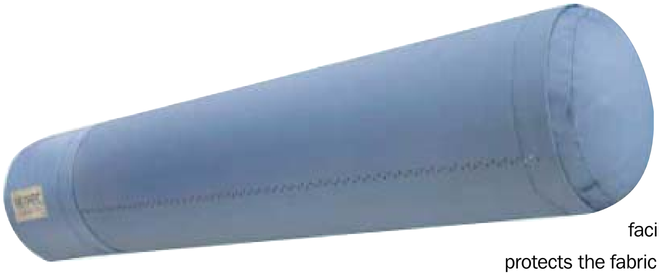

▲ Bacteria-fighting fabric duct

The Sedona-Xm fabric duct, from DuctSox, offers a new matte finish in response to architect requests for non-glossy, nonglare polyester duct surfaces. Sedona-Xm also features the HVAC industry's first UL-classified antimicrobial fabric duct for office buildings, schools, hospitals, athletic facilities, retail stores, and other commercial facilities. The active antimicrobial agent protects the fabric from mold, fungus, and bacterial growth, while also reducing odors generated by microbial growths commonly found in HVAC ductwork systems. It is easy to disassemble, launder, and reinstall with minimum reduction of effectiveness. DuctSox, Dubuque, Iowa. www.ductsox.com **CIRCLE 230**

◄ Back saver, earth saver

The Zody chair, from Haworth, introduces an asymmetrical lumbar support system resulting from a joint study between the manufacturer and the Human Performance Institute of Western Michigan University. The only task chair on the market to provide asymmetrical lumbar support without forward displacement, Zody is based on a cradle-to-cradle design protocol. Assembled using 100 percent wind power, Zody features materials that include up to 48 percent recycled content and are 98 percent recyclable at the end of the chair's life. Haworth, Holland, Mich. www.haworth.com

CIRCLE 231

▲ The type of spider you won't mind in the attic

Spider, Johns Manville's new, spray-in, formaldehyde-free, fast-dry insulation system, contains specially designed glass fibers made primarily from sand. During the installation process, the fibers are mixed with a nonhazardous adhesive that eliminates the need for netting and dramatically speeds up drying schedules—on average more than six times faster than cellulose. When professionally installed, Spider reduces defects such as gaps, inadequate cavity-fill, and settling, resulting in maximum thermal performance and reduced air movement. Spider reaches R-values of 15 in 2' x 4' wall cavities and 23 in 2' x 6' wall cavities. Johns Manville, Denver. www.jm.com **CIRCLE 232**

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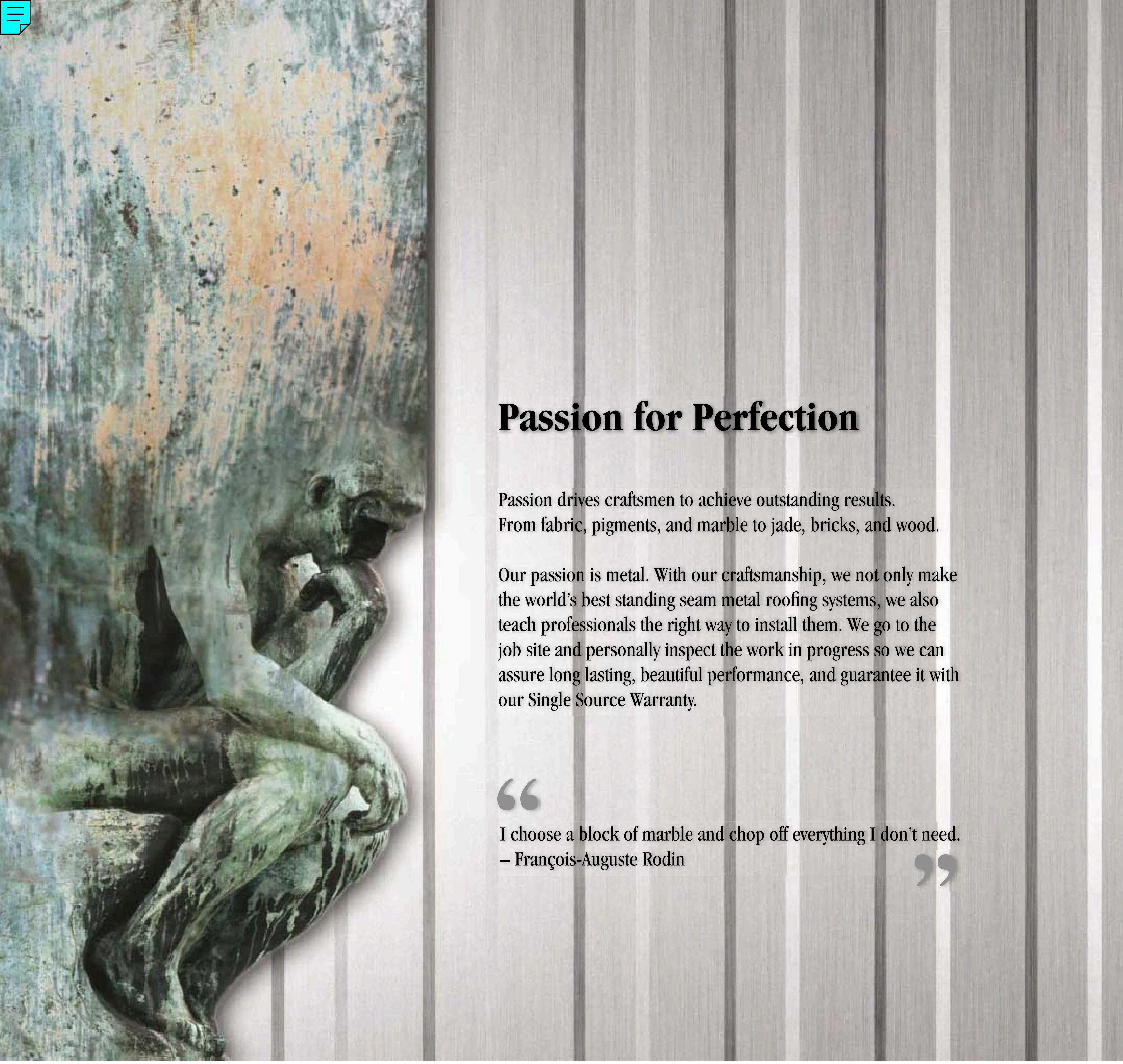

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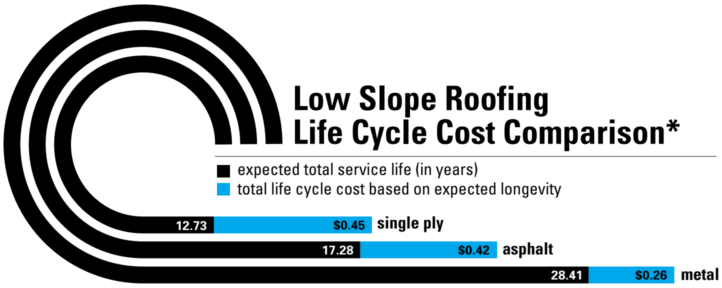

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*Ducker Research, 36 case studies, May 2004

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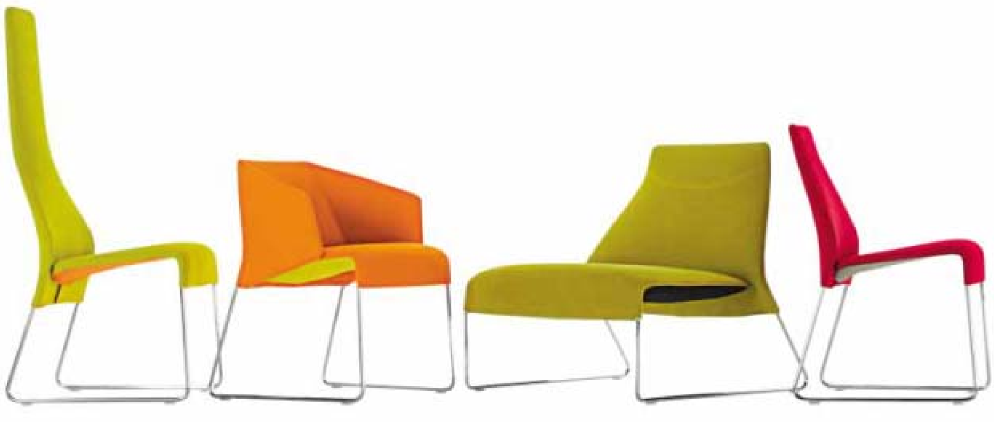
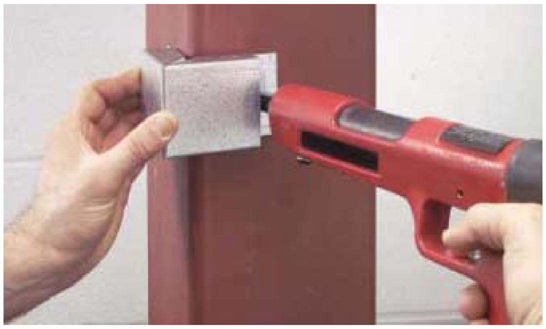


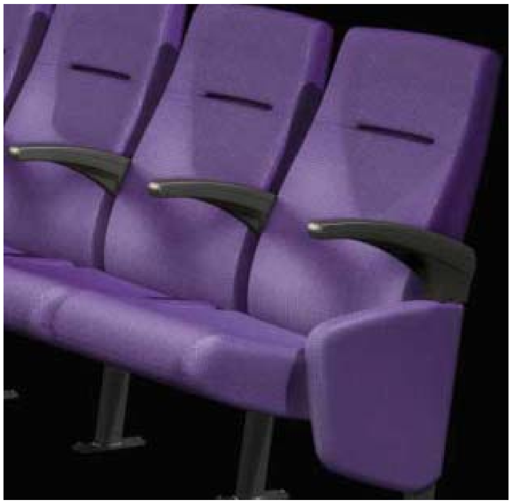
▲ Expanding the family

At this year's Cologne fair, B&B Italia added four new seating elements to the chaise longue and high-backed chair in Patricia Urquiola's Lazy Collection. The collection now includes a low-backed chair, easy chair, armchair, and stools in two sizes. Designed for home and contract use, the chair's bright chrome frames are upholstered in one or two colors. To underline the lightness of the seat, the fabric underneath is designed in a contrasting color. The high-backed chair can be covered in a material specially conceived by Urquiola for the series. B&B Italia, New York City. www.bebitalia.it **CIRCLE 233**



► Speedier column-framing system

The new Loctite Fast Frame column-framing system from Henkel reduces both time and costs associated with framing square concrete or steel columns for drywall installation. According to the manufacturer, the patent-pending system reduces framing time by 80 percent and associated expenses by 40 percent. Loctite replaces stud and track installation with brackets that are attached to concrete columns using adhesives, or to steel columns using powder-actuated fasteners. The brackets fit all square column dimensions and can reduce the time required to frame an 8'-tall column from 40 minutes to 5. The adhesive system requires a 24-hour drying period before drywall installation can begin. Henkel Group, Rocky Hill, Conn. www.fastframe.loctite.com **CIRCLE 234**



◄ Seating for a higher power

Sauder Manufacturing has added Clarity auditorium seating to its line of worship furniture, including pews, upholstered wood chairs, and chancel furniture (for the part of a church containing the altar and seats for clergy and choir). The chairs feature integrated accessories designed specifically for worship facilities, including book holders, communion-cup holders, seat and row identification, aisle lighting, and card and pencil holders. A proprietary pivot-mechanism design harnesses gravity to provide quiet and consistent seat-lift performance. The seating is upholstered in such a way that the fabric is renewable; an armless version of the chair is available, as well. Sauder Manufacturing, Archbold, Ohio. www.sauderworship.com **CIRCLE 235**

For more information, circle item numbers on Reader Service Card or go to www.archrecord.com, under Products, then Reader Service.

Lead Times
Budget Pricing
Fixture Selection
Application Guidelines

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Images, Private residence by architect Hugh Newell Jacobson in Washington, DC.

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Product Literature

Spanish design guide

The Trade Commission of Spain has introduced the *Guide to Spanish Design & Interiors*, a 275-page guide presenting a range of contemporary product designs for residential and commercial spaces. Featuring contributions from more than 75 Spanish companies, the product categories include Home & Accessories, Kitchens, Bathrooms, Lighting, Office, Contract, Street Furniture, and Floor & Wall Tiles. Trade Commission of Spain, New York City. www.spaintiles.info

CIRCLE 236

Wall/ceiling brochures

illbruck Architectural Products' new brochures feature acoustical wall and ceiling products for offices, schools, stores, and other environments. illbruck, Minneapolis. www.illbruck-archprod.com/literature

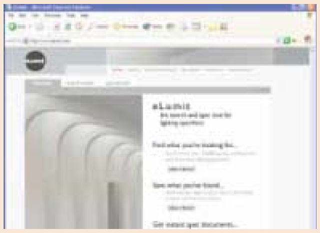
CIRCLE 237

Hardware helper

Doug Mockett & Company's new 28-page brochure features all of the new products the company has introduced in the past six months. Highlights include three new power and data grommets, new Scandinavian-design drawer pulls, and new items for kitchen and bath. Doug Mockett & Company, Manhattan Beach, Calif. www.mockett.com **CIRCLE 238**

NEW SITES FOR CYBERSURFING

Search and spec tool showcases over 30,000 lighting products from 48 spec-grade manufacturers. **www.elumit.com**



Brooklyn-based contemporary furniture maker's site. **www.cityjoinery.com**

Technical Glass Products new site presenting complete product features, testing info, CSI-format specs, and CAD drawings. **www.fireglass.com**

Redesigned site assists in online glass selection. **www.viracon.com**

Perforated products

McNichols has completely updated its new catalog, featuring perforated and expanded metals, wire cloth, safety gratings, handrail components, and fiberglass structurals. The catalog includes new handrail, plank, and decking products. McNichols, Tampa. www.mcnichols.com

CIRCLE 239

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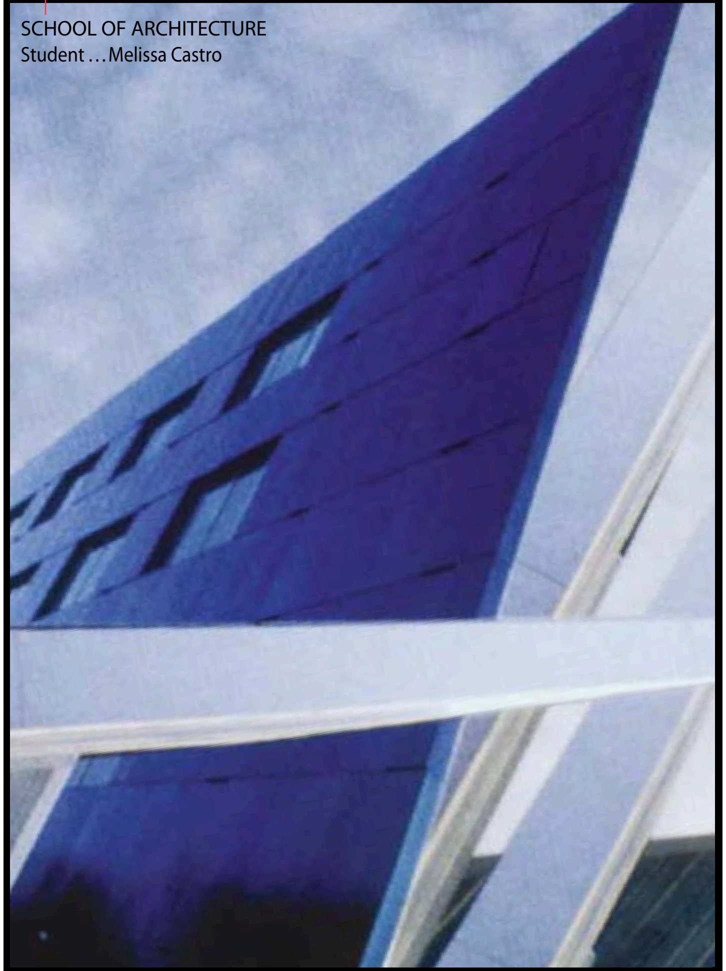
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Product Literature

Fire-rated glass video

Technical Glass Products introduced *Burning Issues: Understanding Today's Fire Rated Glass & Framing*, a free educational video available to architects, specifiers, code officials, and other industry professionals. The 20-minute video guides viewers through the various categories of fire-rated glass products and how to determine which materials are best for a given application. The video also addresses new design innovations in fire-rated glazing materials, the impact of recent code changes to improve product safety, and the effect of new security concerns being shaped by world events. Technical Glass Products, Kirkland, Wash. www.fireglass.com **CIRCLE 240**

Tile and stone spec guide

Laticrete has introduced the *Laticrete Architectural Guidebook* CD-ROM, a resource guide that features a complete installation specification along with the applicable detail drawing, both fully editable to fit the user's exact project requirements, and printable or exportable in a variety of electronic and hard-copy formats. The *Guidebook* works on PC and Mac platforms and includes an industry reference section that allows users to view appropriate codes and national standards for virtually all ceramic tile and stone applications. Laticrete, Bethany, Conn. www.laticrete.com/ag **CIRCLE 241**

Laminate selections

Abet Laminati has a new brochure describing more than 500 decorative, high-pressure laminate surfaces, including metallics, wood grains, solid colors, textures, and digitally printed or silk-screened designs. Abet Laminati, Englewood, N.J. www.abetlaminati.com **CIRCLE 242**

Color-trend booklet

Invista, the manufacturer of Antron carpet fiber, announced that its *2005 Color Point of View* (*POV*) booklet is now available. The third issue of the *Color POV* explores five essential color-trend indicators (areas that have been influencing color and design for a long time) and five emerging trends. Each category has inspired a palette or family of colors that work together, and each of the 50 new colors is codified to the Pantone color specifier for architecture and interiors. Invista, Kennesaw, Ga. www.antron.invista.com **CIRCLE 243**

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Program title: **"How Is LEED Faring After Five Years in Use?," Architectural Record (06/05, page 135).** 065EDITK

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Program title: **"Associations: Dynamic Connections for the Profession"(06/05, page 163).** 06SPONN

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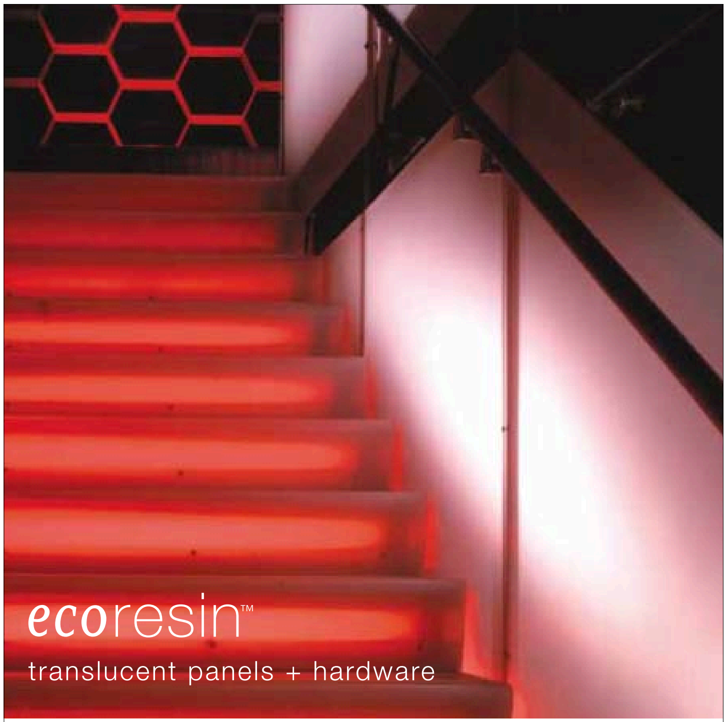

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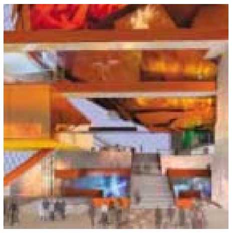
Dates & Events

New & Upcoming Exhibitions

Going Green Exhibition
San Francisco
June 1–30, 2005
This exhibition showcases the 2005 American Institute of Architects Committee on the Environment (COTE) Top 10 award winners as well as past winners. At the AIA San Francisco Gallery. Call 415/362-7397 or visit www.aiasf.org.

The Architect Jean Nouvel Meets Louisiana
Humblebaek, Denmark
June 7–September 18, 2005
Jean Nouvel is one of the most famous members of the generation that has been called the New Wave of French architects, all of whom participated in "Les Grands Projets" in Paris during the Mitterrand era.



Jean Nouvel's self-curated exhibition aims to demonstrate his fundamental architectural principle—the strong dialogue with the spirit and specific character of a place that forms the point of departure for every Nouvel project. At the Museum of Modern Art. Call 45/4919-0719 or visit www.louisiana.dk.

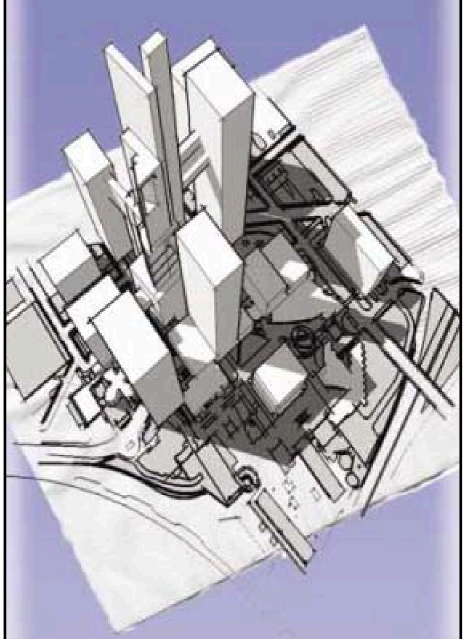
Policy and Design for Housing Beyond the Minimum: Lessons of the Urban Development Corporation 1968–1975
New York City
June 10–September 10, 2005
In response to the lack of housing units being built for families with limited income, a concerned group of architects, planners, policy makers, public advocates, and environmental psychologists will take a look at the situation by presenting an evaluation of the housing produced by the New York State Urban Development Corporation. The exhibition will use plans and photographs of a sample of projects around New York State that demonstrate housing of differing conditions: urban and suburban; mixed income; high-rise and low-rise; various densities; and various building materials and technologies. At the Center for Architecture. Visit www.udchousing.org or www.aiany.org.

Going, Going, Gone? Mid-Century Modern Architecture in South Florida
Fort Lauderdale, Fla.
July 8–October 30, 2005
Can we still save South Florida's Midcentury Modern architecture? This exhibition is a photographic journey through Broward and Miami-Dade counties, featuring the work of photographer Robin Hill, who has shot dozens of outstanding South Florida structures dating back to the mid-20th century. At the Museum of Art. Call 954/525-5500 or visit www.moafl.org.

Romantic Modernist: The Life and Work of Norman Jaffe, Architect
Southampton, N.Y.
July 24–September 18, 2005
Norman Jaffe built over 600 projects during his 35-year career. He received numerous architecture awards and also participated in national and international exhibitions at leading institutions, including New York's Museum of Modern Art. Eastern Long Island is where Jaffe found his place in American architecture, creating unique vacation homes while exploring his love of light and form. This is the first major exhibition to examine the life and work of this important American architect. At the Parrish Art Museum. Call 631/283-2118 or visit www.parrishart.org.

Jean Prouvé: Three Nomadic Structures
West Hollywood
August 14, 2005–November 27, 2006
The first American presentation of the work of celebrated French designer and architect Jean Prouvé (1901–84), this exhibition includes furniture, vintage photography by Lucien Hervé, and architectural elements that address the most important aspects of Prouvé's practice: technological innovation, itinerant housing, the development of modular systems, and the use of aluminum. The exhibition installation, designed by Evan Douglis, is inspired by Jean Prouvé's commitment to exploring the most advanced technology of his time. At the Museum of Contemporary Art (MOCA) Pacific Design Center. Call 213/626-6222 or visit www.moca.org.

2005 Serpentine Gallery Pavilion Program
London
Summer 2005
Portuguese Pritzker Prize–winning architect Alvaro



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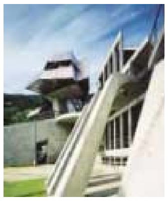
Siza and his long-time collaborator, the distinguished architect Eduardo Souto de Mouro, will design the next Serpentine Gallery Pavilion. Since the commission was launched in 2000, it has resulted in four landmark temporary structures. At the Serpentine Gallery. Call 020/7402-6075 or visit www.serpentinegallery.org.

Ongoing Exhibitions

Michael Maltzan: Alternate Ground
Pittsburgh
Through June 12, 2005
A complete monographic exhibition dedicated to the work of Michael Maltzan and his Los Angeles–based practice Michael Maltzan Architecture. At the Heinz Architectural Center, Carnegie Museum of Art. Call 412/622-3131 or visit www.cmoa.org.

2nd International Architecture Biennale Rotterdam: The Flood
Rotterdam, the Netherlands
Through June 26, 2005
With the exhibitions *The Water City*, *Mare Nostrum*, *Polders*, *Three Bays*, and *Flow*, the biennale will spotlight the relation between water and architecture in the Netherlands and around the world. In addition, the biennale will feature numerous conferences, lectures, excursions, a film program, a public weekend, and a city program. At Las Palmas and the Netherlands Architecture Institute. For further information, visit www.biennalerotterdam.nl.

Gunther Dominig:
Structures That Fit My Nature
West Hollywood
Through June 26, 2005
The exhibition focuses on two key projects by the contemporary Austrian architect: the Steinways (Stone House), the architect's own home, still in process, and the prize-winning Nuremberg Documentation Center (Dokumentationszentrum), a historical archive that transforms Albert Speer's Nazi coliseum into a memorial. At MAK Center at the Schindler House. Call 323/651-1510 or visit www.makcenter.org.



Ornament-Architecture Exhibition
Pittsburgh
Through June 13, 2005
This exhibition aims to examine and reveal the contemporary understanding of ornament in present architectural design, allowing for a new perspective on historical precedent. At Edge Studio. Call 412/345-5005 or visit www.edge-studio.com.

Constructing Stata:
Photographs of Richard Sobol
Cambridge, Mass.
Through June 15, 2005
A collection of unpublished photographs captures the construction process that brought MIT and the world the Frank Gehry–designed Stata Center. Through the works of Boston-based Richard Sobol, visitors experience up close how this spectacular building came together. At MIT Museum's Compton Gallery. Call 617/253-4444 or visit www.web.mit.edu/museum.

Carlos Garaicoa
Los Angeles
Through July 17, 2005
The first U.S. museum survey of recent work by Cuban artist Carlos Garaicoa, who addresses Cuba's politics and ideologies through the examination of Modern architecture. At the Museum of Contemporary Art (MOCA) Pacific Design Center. Call 213/626-6222 or visit www.moca.org.

The High Line
New York City
Through July 18, 2005
An exhibition of new High Line design work by the team of Field Operations and Diller Scofidio + Renfro. At the Museum of Modern Art. Visit www.thehighline.org.

Heather Allen: Architectural Textiles
Washington, D.C.
Through July 29, 2005
This exhibition features 30 of Allen's handwoven and painted rugs and wall textiles. The architectural imagery represents Allen's exploration of interior space and emotional color. At the Octagon, the museum of the American Architectural Foundation. For information, call 202/638-3221 or visit www.theoctagon.org.

Vanishing Point
Columbus, Ohio
Through August 14, 2005
This exhibition features photographs, paintings, drawings, video, and mixed-media installations that explore the aesthetics of contemporary urban "nonspaces." These ubiquitous public

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interior architecture

ENTRY DEADLINE: August 19, 2005
SUBMISSION DEADLINE: September 16, 2005

regional & urban design

ENTRY DEADLINE: September 9, 2005
SUBMISSION DEADLINE: October 7, 2005

the twenty-five year award

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For more information, go to
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Yale Center for British Art, New Haven, Connecticut; architect: Louis I. Kahn, FAIA; completed by Pellecchia & Meyers; photo by Richard Caspole, courtesy of the Yale Center for British Art

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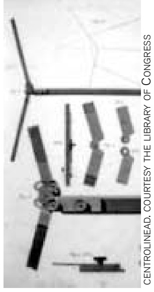
lectures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June 13
Vedic Architecture: A Holistic Approach to Sustainability
Jonathan Lipman, AIA; and Jeffrey Abramson, partner in The Tower Companies

June 16
An Architect's Odyssey from Ruling Pens to Computers
David Thompson, AIA, vice president of RTKL Associates Inc.

June 28
Seminar: Green Building Guidelines
Paul Konove, president of Carolina Country Builders, Chatham County, Inc.

exhibitions

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Jewish Washington: Scrapbook of an American Community
opens June 24, 2005

Tools of the Imagination
through October 10, 2005

Liquid Stone: New Architecture in Concrete
through January 29, 2006

Washington: Symbol & City
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Dates & Events

realms—convenience stores, hotel lobbies, shopping malls, airport terminals, parking lots—are often considered anonymous, banal, or otherwise socially and culturally insignificant. Rather than objectively documenting these spaces, the artists in *Vanishing Point* interpret them by focusing on their experiential and atmospheric qualities. At the Belmont Building, Wexner Center for the Arts. Call 614/292-0330 or visit www.wexarts.org.

Filigree Spaces:
Textile Installations by Piper Shepard
Baltimore
Through September 18, 2005
The two new installations, featuring a dramatic curtain wall in the Baltimore Museum of Art's lobby and a "room within a room" design in the BMA's textile gallery, explore the connection between textiles and architecture. At the Baltimore Museum of Art. Call 410/396-7100 or visit www.artbma.org.

a_show Stage 2: Austrian Architecture in the 20th and 21st Centuries
Vienna
Through September 2005
Due to the sheer scope of material covered by the exhibition, *a_show* is being subdivided into 10 themes to be opened successively in three stages. The first stage, covering the period 1850–1918, opened in March 2004 with much success. *Stage 2* extends to the period from 1919–58. At the Architekturzentrum Wien. Call 431/522-3115 or visit www.azw.at.

On Tour with Renzo Piano & Building Workshop: Selected Projects
Los Angeles
Through October 2, 2005
Featuring several seminal works, the exhibition shows an intimate view of one of the most respected and visionary architects of our time. Piano's involvement in each stage of a building's development—from concept and master plan to construction and detailing—is chronicled. In the Ahmanson Building at the Los Angeles County Museum of Art. Call 323/857-6000 or visit www.lacma.org.

Transformed: Uncommon Uses of Materials in Contemporary Design
Philadelphia
Through October 9, 2005
With a focus on both form and function, this exhibition comprises 19 contemporary design objects in the Philadelphia Museum of Art's collection, providing an illuminating look at what happens when today's designers fuse utilitarian objects with unconventional materials, such as silicon, recycled plastic, fibrated concrete, and even goose feathers. The exhibition includes pieces by Ingo Maurer, Frank O. Gehry, Tokujin Yoshioka, and Fernando and Humberto Campana, among others. At the Philadelphia Museum of Art. Call 215/763-8100 or visit www.philamuseum.org.

Lectures, Conferences, and Symposia

Architects in Troubled Times:
Mies and the Making of Modernism
Chicago
June 4, 2005
Noted author and historian Franz Schulze will deliver the keynote address at a conference focused on the legacy of Mies van der Rohe. At the Illinois Institute of Technology. Call 312/922-3432 or 312/332-5870 for more information.

The New York State Urban Development Corporation Symposium Committee
New York City
June 10–11, 2005
The Symposium's panels will discuss the UDC initiative, operations, emphasis on design quality and livability, the role of politics, and the future of housing for people with limited income. Panelists will include former UDC principals, housing developers of for-profit and not-for-profit projects, architects and planners, architectural historians and critics, and current housing officials. In conjunction with the exhibition *Policy and Design for Housing Beyond the Minimum: Lessons of the Urban Development Corporation*. At the Graduate Center, CUNY. Visit www.UDChousing.org.

NeoCon World's Trade Fair
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- ☐ (3) Designer
- ☐ (4) Specification Writer
- ☐ (5) Interior Designer
- ☐ (6) Contractor or Builder
- ☐ (7) Lighting Designer
- ☐ (8) Other

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- ☐ (9) Architectural or A/E Firm
- ☐ (10) Commercial, Industrial or Institutional
- ☐ (11) Contractor or Builder
- ☐ (12) Government Agency
- ☐ (13) Interior Design
- ☐ (14) Lighting Design
- ☐ (15) Other

3. Building Types you are currently working on?
- ☐ (16) Commercial
- ☐ (17) Educational
- ☐ (18) Healthcare
- ☐ (19) Industrial
- ☐ (20) Multi-Family Residential
- ☐ (21) Single-Family Residential
- ☐ (22) Other

4. Reason for Inquiry?
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2005 Ecobuild America Conference and Show
Orlando
June 20–23, 2005
To support the needs of an expanding green and sustainable building market, the conference combines educational sessions, tutorials, and cutting-edge information from national vendors by covering the best building techniques and the latest technology. At Disney's Coronado Springs Resort and Convention Center. Visit www.sbicouncil.org.

Green Cities Mundaneum 2005: IV International Reunion of Architecture
San José, Costa Rica
June 23–25, 2005
Mundaneum is dedicated to the discussion of the state of cities, mainly in the developing world, its impact on the natural environment, and of recent world architecture. Organized every two years by the faculty of the Architecture and Urbanism department of Universidad del Diseño, speakers include Jamie Lerner of Curitiba, Brazil; Albert Pope of Rice University; architects Michael Sorkin and Steven Ehrlich, as well as other experts from Europe and Latin America. For further information, visit www.unidis.ac.cr.

Film: Philip Johnson: Diary of an Eccentric Architect
Washington, D.C.
June 25, 2005
Narrated by Philip Johnson himself, this film presents his work, the importance of the act of creating architecture, the actual construction of a design plan, and the steps taken to ensure that his architectural creations interact with their environment. At the National Building Museum. Call 202/272-2448 or visit www.nbm.org.

Seminar: Green Building Guidelines
Washington, D.C.
June 28, 2005
In this intensive seminar, cosponsored with the Sustainable Buildings Industry Council, home builders, architects, and remodelers will learn about sustainable home-building design. Paul Konove, president of Carolina Country Builders of Chatham County, will cover such topics as sustainable site planning, increased energy efficiency, and environmentally sound building materials and construction waste-management practices. Call 202/272-2448 or visit www.nbm.org.

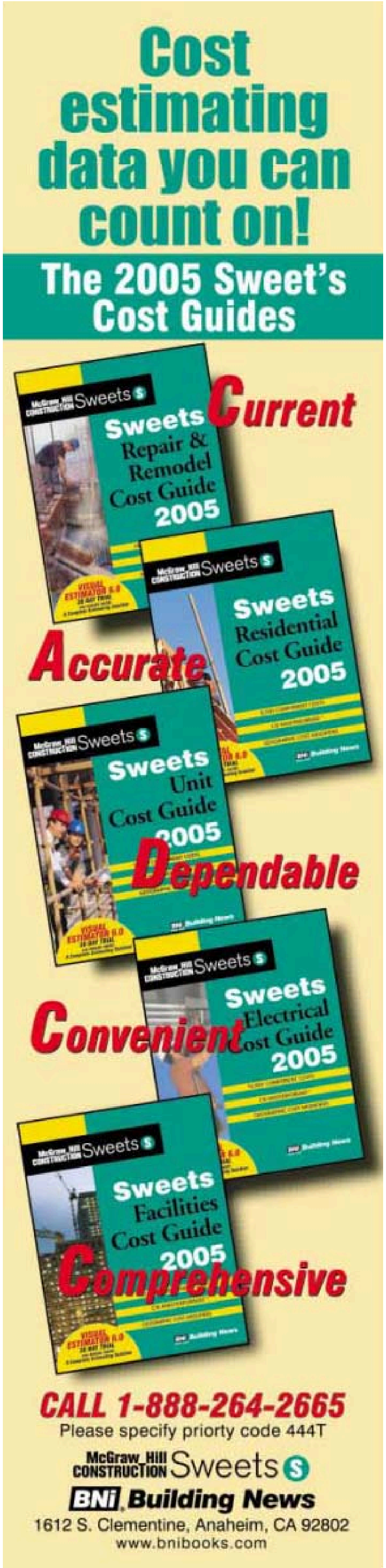
Understanding NFPA 101
Hoffman Estates, Ill.
June 30–July 1, 2005
A two-day course to help architects, building inspectors, and plan reviewers understand the basic requirements of the 2002 edition of the Life Safety Code. At the Building and Fire Code Academy. Call 847/884-4969 or visit www.bfcacademy.com.

Rafael Viñoly Architectural Training and Research Initiative
New York City
Application deadline: July 1, 2005
A 14-week course of weekly master classes starting September 2005 will focus on the specific nature of the intellectual and operational instruments that are the basis of a professional practice. The tuition-free course, aimed at advanced students or teachers of architecture or those already in practice, is intended to bridge the significant gap between the nature of formative instruction in architecture schools and the requirements of the professional field. For additional information, visit www.rvatr.com.

The UIA 2005 Istanbul Congress
Istanbul
July 3–7, 2005
The UIA 2005 Istanbul Congress will be organized under the theme of "Cities: Grand Bazaar of Architecture" as a multidimensional event including meetings, conferences, interviews, exhibitions, competitions, tours, an architectural fair, as well as social and cultural activities. Visit www.uia2005istanbul.org for more information.

Competitions

The John M. Clancy Award for Socially Responsible Housing
Deadline: June 13, 2005
This award recognizes and encourages excellence in the planning, design, construction, and maintenance of socially responsible urban housing. It honors an organization, group, or individual who has been a major force behind one or more built housing developments that make a difference in the lives of diverse populations of all income levels through the creation of high-quality multifamily housing. Visit www.johnclancyaward.org.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Higher Education Facilities Design Awards

Deadline: June 21, 2005

Public and private college and university facilities built anywhere in the world by New England architects are eligible, and architects anywhere in the world may submit projects built in New England. Visit www.architects.org/awards.

2005 Internship Conference Essay Competition

Deadline: July 1, 2005

The Advisory Committee invites entrants for an essay competition to select 25 emerging professionals to attend and participate in the conference in San Antonio, Texas, September 22–24, 2005. Entrants are asked to respond in 500 words or less to one of the following questions: “What should an architectural internship be?” or “If you could change one thing about internship in architecture, what would that change be?” Visit www.designingtomorrowsarchitect.org.

Park Avenue Design Ideas Competition
Marco Island, Fla.

Registration Deadline: July 1, 2005

The purpose of this competition is to create ideas and goals for the future development of this urban landscape nestled in the heart of Marco Island. It is open to all architects, planners, landscape architects, students, and artists. Visit www.aiaflasw.org for further information.

Shinkenchiku Residential Design Competition 2005

Deadline: July 13, 2005

A call for entries that explore new potential in architecture through the design of “the residence, a place for human dwelling.” Two architects, Tadao Ando and Richard Rogers, will serve as judges. Visit www.japan-architect.co.jp/english/5info/topics/skcompe2005/skcompe2005.html.

2005 Brick in Architecture Awards

Deadline: July 15, 2005

Licensed architects are encouraged to submit their best work completed since January 1, 2000, in which brick is the dominant building material. Visit www.gobrick.com for further information.

Unbuilt Architecture Design Awards

Deadline: July 19, 2005

Any architect, architectural educator, or architecture student anywhere in the world may submit unbuilt client-sponsored and/or theoretical projects. For information, visit www.architects.org/awards.

Juried Photo Exhibits at Build Boston

Deadline: August 1, 2005

All New England architects, landscape architects, and interior designers who are members of the AIA, ASID, ASLA, or IIDA are eligible. Visit www.architects.org/awards.

The 22nd Antron Fiber Design Award

Deadline: September 16, 2005

This award program recognizes designers who are setting new standards of creativity in commercial interior design through the innovative use of carpet. Visit www.antron.invista.com/designwards.

E-mail event and competition information two months before event or submission deadline to elisabeth_broome@mcgraw-hill.com.

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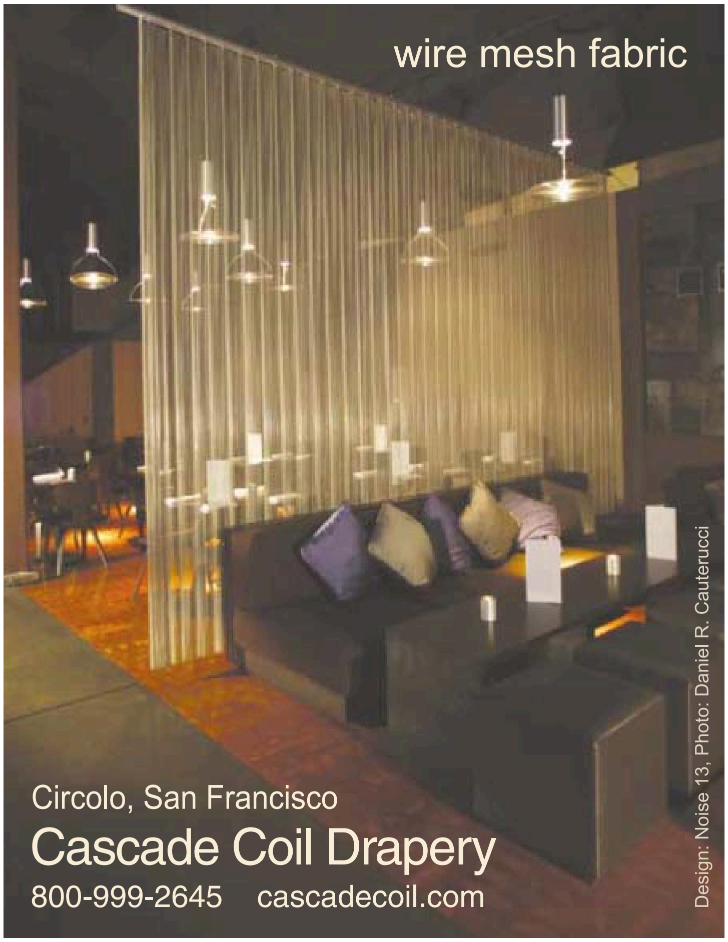
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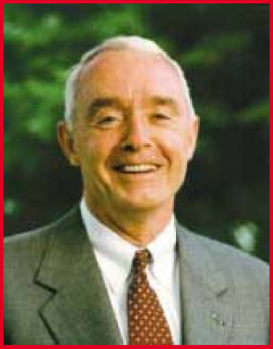

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- The People Side: Your AEC Workforce is Facing Technology-Driven Change
- Winning Teams! Companies Who Have Moved Up the Most on Their Respective ENR Top Lists

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Harvey M. Bernstein, V.P., Industry Analytics & Alliances, **McGraw-Hill Construction**

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Mike Kenig, Vice Chairman, **Holder Construction**

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For a complete list of panelists or to register, visit the Forum website. **www.construction.com/event/**

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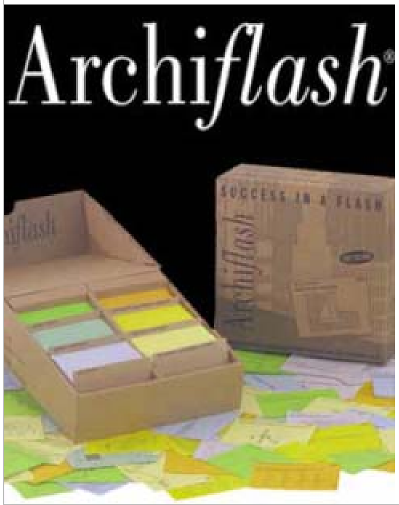

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2 Site construction

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FAAC is the world's largest specialized manufacturer of automated operators for swing, slide, and barrier gate systems. FAAC hydraulic operators meet or exceed strict European safety requirements as well as UL325 and CSA standards in North America. FAAC received ISO-9001 certification in 1996. Swing gate operators for residential and commercial applications include on-gate and in-ground versions that are famous for being small, but powerful. Barrier gates versions include a high-speed model (.8 sec.) for freeway use and a special model designed for heavy traffic wide entrances that require long beams (up to 23-ft.).

800-221-8278
www.faacusa.com

| Circle Reader Service #151

Customized Arches & Trims

6 Wood & plastics

Architectural Products by Outwater, LLC

As physically and creatively expansive as your imagination desires and your blueprints demand, Outwater offers the obvious time and cost saving alternative to manually fabricated, labor intensive wood and plaster decorative arches and trims with its revolutionary Library System. Comprising symmetrical left and right side semi-arches that can be readily cut and joined on site to form full arches with radius openings from 25-3/16-in. to 47-1/4-in., complementary integral trims and corresponding architectural elements can be interchanged and utilized in various combinations to create a truly customized installation.

800-835-4400
www.outwater.com

| Circle Reader Service #154

Commercial Grade Outdoor Furniture

2 Site construction

Modern Outdoor

High style, clean-lined simplicity, short lead times, environmentally conscious materials—these are the attributes of Modern Outdoor—a producer of top quality outdoor furniture with a definitive modern aesthetic. The Modern Outdoor Collections are commercial grade products designed for the restaurant, hospitality, and resort industries, with an aesthetic that is perfect for a residential client's backyard setting. The entirety of the Collection is made from Ipe, Electropolished Stainless Steel and Natural Composite materials. Modern Outdoor offers attractive pricing.

818-838-7060
www.modernoutdoor.com

| Circle Reader Service #152

Architectural Columns, Balustrades & Mouldings

6 Wood & plastics

Melton Classics, Inc.

Melton Classics provides the design professional with the most comprehensive selection of quality architectural products in the industry, including architectural columns, balustrades, moldings, cornices, and a wide array of architectural elements. Architectural columns are available plain or fluted, load-bearing or column covers, round or square in fiberglass, fiberglass/marble composite, synthetic stone, cast stone, GFRC, and wood for paint or stain. Melton Classics offers a maintenance-free balustrade product ideal for any application.

800-963-3060
www.meltonclassics.com

| Circle Reader Service #155

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Tall Wall Systems

6 Wood & plastics

Trus Joist, A Weyerhaeuser Business

Trus Joist's tall wall system offers architects, designers and builders, walls 10- to 30-ft. in height, allowing spacious, open floor plans. The design of a tall wall system using TimberStrand® LSL and Parallam® PSL technologies provides a wall that will start straight, stay straight and deliver predictable performance. Visit Trus Joist, A Weyerhaeuser Business at www.trusjoist.com or call 800-338-0515.

800-338-0515
www.trusjoist.com

| Circle Reader Service #156

Fire-Rated Aluminum Doors & Windows

8 Doors & windows

fire-rated aluminum!

Aluflam

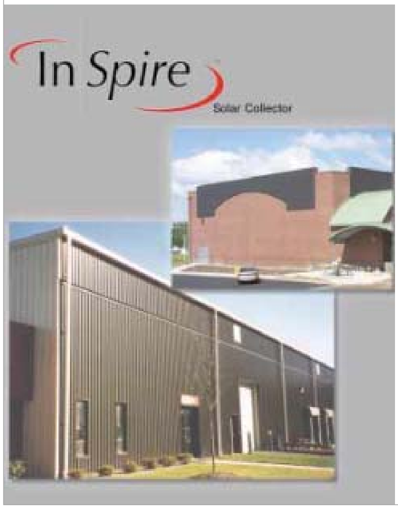
Imagine being able to specify a fire-rated system that blends in so well with non-rated materials that you virtually can't tell them apart. Imagine the clean, rich lines of true extruded aluminum frames and large panels of clear glass. With ALUFLAM framing and VETROTECH SAINT-GOBAIN glass, this is reality. Contact them for further information. Fax number 714-899-3993. Email info@aluflam-usa.com.

714-899-3990
www.aluflam-usa.com

| Circle Reader Service #159

Metal Wall Cladding

7 Thermal & moisture protection



ATAS International, Inc.

ATAS International Inc. introduces the INSPIRE Wall System, a new metal wall cladding made from .032 aluminum with tiny perforations in a heat absorbing surface. The premium finish is available in sixteen standard colors. Mounted a few inches from the main wall, on preferably a southern exposure, fresh air is drawn through the perforations and directed into the building with a fan and duct system. Air space between the walls also acts as an insulator. INSPIRE Wall is environmentally friendly, because it uses clean, natural energy.

800-468-1441
www.atas.com

| Circle Reader Service #157

Double Action Doors

8 Doors & windows

Eliason

Easy Swing® Doors manufactured exclusively by Eliason Corporation. Model PMP-2 high impact traffic door reinforced throughout the impact area and back spline. Prevents cracking at hinge location and warping at swing edge. Strong, durable, and yet flexible enough to absorb the initial impact without the use of spring bumpers. Excellent for use in sales to stock room use. All doors are custom manufactured to your finished opening. Uses of doors range from sales to stock room, walk-in coolers, delis, secondary freezer doors, restaurants, or just personnel doors. Easy to install.

800-828-3655
www.eliasoncorp.com

| Circle Reader Service #160

Metal Snow Guards

7 Thermal & moisture protection

East Coast Lightning Equipment

East Coast Roof Specialties, a Division of East Coast Lightning Equipment, introduces Ice-Brakes—metal snow guards for metal roofs. Their cast aluminum pad style snow guards are designed to prevent dangerous and destructive snow and ice avalanches from metal roofs by holding built-up snow in place. Ice-Brakes are low profile—projecting just over 1-in. from the surface of the roof. They cast little shadow and are less conspicuous than taller style snow guards. Ice-Brakes are installed with or without roof penetrations, and are handcrafted and economically priced.

860-379-9072
www.icebrakes.com

| Circle Reader Service #158

High-Performance Translucent Building Systems

8 Doors & windows

Kalwall Corporation

Gathering LEED™ points through daylighting can greatly impact any project. Kalwall's highly insulating, diffuse-light transmitting, translucent skylights, wall systems and replacement windows are uniquely suited to achieve the desired results. The use of Kalwall can contribute points in the categories of Sustainable Sites, Energy & Performance, Materials & Resources, and Indoor Environmental Quality.

800-258-9777
www.kalwall.com

| Circle Reader Service #161

Hurricane-Resistant Glass

8 Doors & windows

Oldcastle Glass

Featured on the Ritz-Carlton Club®, St. Thomas, StormGlass™—an Oldcastle Glass® exclusive—was chosen after other products failed. In independent testing, StormGlass™ met test requirements for large glass sizes of up to 50-sq.-ft. That means the freedom to design larger glazed openings while meeting the most stringent codes for hurricane resistance. StormGlass™ employs the industry's most advanced interlayer technology (the thinnest in the hurricane-resistant glazing market). The benefit? The highest level of protection without compromising the optical quality of the glass.

www.oldcastleglass.com

| Circle Reader Service #162

Pivoting Blinds

8 Doors & windows

Now you see it, Now you don't!

Unicel Architectural Inc.

Unicel Architectural Inc. has developed a unique patented glazing product: Vision Control®. With this custom-designed unit, you can enjoy total control of light, privacy and sound without worrying about the cleaning. Unlike ordinary Venetian blinds, Unicel's pivoting blinds made of extruded aluminum are mounted inside a hermetically sealed glass unit offering you 100% dust-free and germ-free louvered glazing. Blinds are operated using a hand crank, thumbwheel, motorized switch or computer; cord-free and string free.

www.visioncontrol.qc.ca

| Circle Reader Service #165

Retractable Roof Enclosures & Operable Skylights

8 Doors & windows

OpenAire Inc.

Custom-designed retractable roof structures and operable skylights capable of spanning up to 140-ft. At the touch of a button, motorized panels retract to open up to 50% or more of the roof area. OpenAire can span up to 140-ft. and do custom designs (domes, barrel vaults, biparting, etc.) using its exclusive maintenance-free, thermally broken aluminum framing. These enclosures and operable skylights are perfect for indoor waterparks, pools, atria, and anywhere that you want to bring the outside in.

www.openaire.com

| Circle Reader Service #163

Wood Interior Windows & Doors

8 Doors & windows

Weather Shield Windows & Doors

Engineered with unique features and built for unparalleled performance, the Weather Shield Legacy Series is simply one of the best window and door lines available for custom and luxury homes. Available in tilt double-hung, casement, awning, and direct-set windows and French doors, the premium windows feature elegant wood interiors in a variety of wood species from Weather Shield's Custom Wood Interiors Collection™.

800-477-6808
www.weathershield.com

| Circle Reader Service #166

Fire-Rated Frames

8 Doors & windows

Technical Glass Products

Technical Glass Products' Fireframes Hardwood Series provides an attractive fire-rated framing alternative for individual glass lites in sizes up to 31-sq.-ft. The Hardwood Series features an engineered core for dimensional stability and a thick hardwood face for unmatched beauty. The frames are available in a variety of wood species and come in complete packages for easy installation. Hardwood Series frames are available with fire ratings from 20 to 60 minutes.

888-397-3473
www.fireglass.com

| Circle Reader Service #164

Medical Office Accordian Doors

8 Doors & windows

Woodfold-Marco Mfg., Inc.

HIPAA Woodfold, a logical solution. Woodfold custom made accordion folding doors are a great solution for medical record storage areas. Totally suspended from overhead track, the Woodfold accordion folding door effectively creates a file storage room. Each Woodfold door is custom made exactly to size. 18 in-stock finishes are available for shipment within two to three weeks. Installation is quick and easy with minimal disruption within the medical office. Fax number 503-357-7185.

503-357-7181
www.woodfold.com

| Circle Reader Service #167

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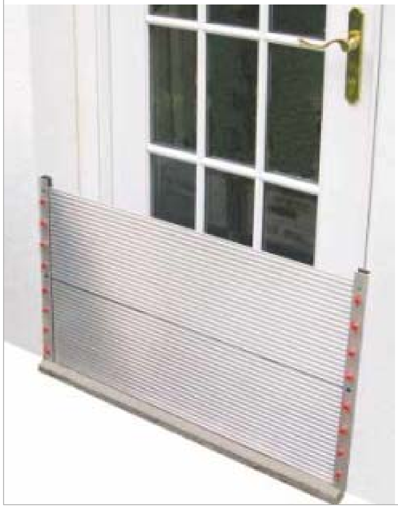
Flood Barrier Shield for Doors

8 Doors & windows



Zero International, Inc.

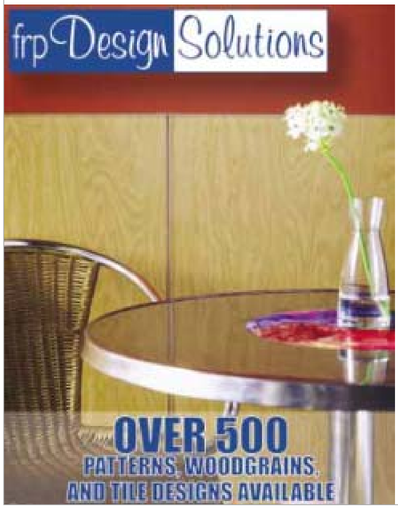
A simple to install and remove barrier that helps in protecting doors from water ingress in flood-prone areas. Available in sections, to make ten- and 20-in.-high barriers — the aluminum shield requires no tools for easy insertion into pre-mounted vertical channels. The unit complies with (FEMA) and (FIA) regulations, for use on doors. The key to the shields impermeability is the use of closed cell sponge neoprene rubber that lines the aluminum channel brackets and the bottom of each shield section. Contact their Web site.

www.zerointernational.com

| Circle Reader Service #168

Decorative Wall Panels

9 Finishes



Kemlite Company

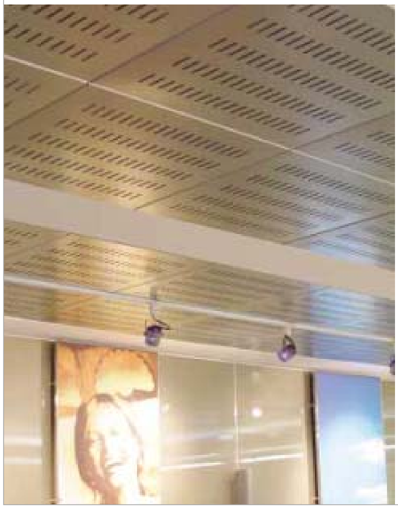
frpDesign Solutions is a family of decorative wall panels that provides an alternative to traditional wall coverings such as ceramic tile, wood paneling or vinyl wall coverings. Offering both functionality and design, products in the frpDesign Solutions line are made of a moisture resistant frp panel with a decorative finish that include a myriad of colors, patterns and woodgrains as well as a tile look panel. Available with over 500 hundred choices, frpDesign Solutions is easy to install and maintain. For more information, visit Kemlite on the Web.

888-332-6377
www.frpdesignsolutions.com

| Circle Reader Service #171

Perforated Metal Ceilings

9 Finishes



Gage

Setting a new standard for perforated metal ceilings, Gage introduces the 700 Series of perforated metal ceilings manufactured from 50% recycled aluminum. Standard designs include five distinctive finishes and 14 different perforation patterns. Selective and custom designs are also available. Contact the Gage factory for literature and samples.

www.gageceilings.com

| Circle Reader Service #169

Impact Wall Protection

9 Finishes

RC m
MUSSON
Impact Protection
Wall Protection ◆ Handrails ◆ Corner Guards

Musson Rubber Co.

Musson has released a new catalog featuring the latest products in impact wall protection. They include flat wall guards in three heights for high-traffic areas. Also, handrails in three different profiles, sculpted, flat, and cylindrical, which meet ADA guidelines for safety and support. And surface-mounted corner guards in three styles to protect any possible corner situation. All are easily installed and constructed of heavy aluminum retainers.

800-321-2381
www.mussonrubber.com

| Circle Reader Service #172

Cast Metal Wall Surfacing Material

9 Finishes

Gage

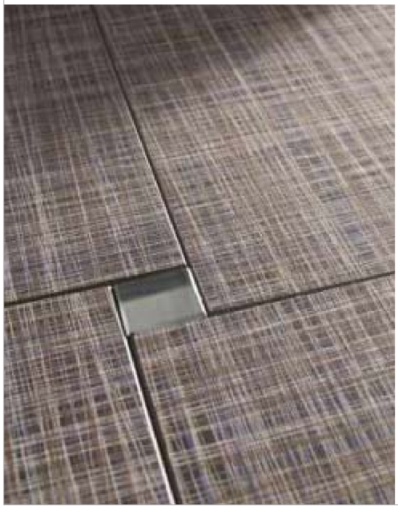
Gagecast® is a cast metal wall surfacing material suitable for a variety of interior architectural applications where patterns that feature high luster, relief, durability, and cost effective installation are a requirement. Twenty-eight designs are standard, however, custom collaboration is encouraged. Gagecast® is one component of Gage Vertical Surfacing. Contact the factory for product literature and selected samples.

www.gageverticalsurfacing.com

| Circle Reader Service #170

Italian Clay Flooring

9 Finishes



Viva Ceramica

Colors meet the purest clays forged and pre-compacted in a higher than normal thickness (11-mm). Complete penetration between body and color grants lasting optical results, maximum ultimate tensile strength, and absolute resistance to acids, scratches, frost, and dirt. Using a totally environmentally-friendly manufacturing process, assured by ISO9001 quality system, the MELANGE series is guaranteed for 20 years for private homes and ten years for public areas. Created by Viva, daring to be different.

www.cerviva.it

| Circle Reader Service #173

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T: (212) 904-2010 / F: (609) 426-7136
deidre_allen@McGraw-Hill.com

Environmentally Responsible Hardwood

9 Finishes

Weyerhaeuser

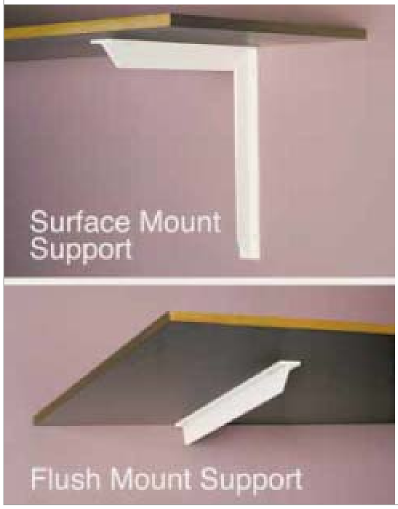
Lyptus® is an environmentally responsible hardwood ideally suited for high-end flooring, cabinets, architectural millwork, residential and commercial furniture, among others. Its remarkable beauty features the fine grain of mahogany allowing it to take lighter or darker stains and finishes evenly such as: walnut, cherry, mahogany or maple. Better yet, Lyptus® is winning accolades from manufacturers who prefer to use an environmentally responsible hardwood. To learn more about Lyptus® products, call (877) 235-6873 or visit www.weyerhaeuser.com/lyptus.

877-235-6873
www.weyerhaeuser.com/lyptus

| Circle Reader Service #174

Counter Support Brackets

10 Specialties



Rangine Corporation / Rakks

Rangine Corporation's counter support brackets provide an easy-to-install alternative to full-height laminated panels. Available in a range of sizes to support counters up to 30-in.-deep, brackets install easily into studs or blocking and can support loads up to 450-lb. Less expensive than laminated supports, they increase open space while improving handicapped access and ergonomics. Brackets can be ordered in either surface or flush mounted configurations to provide heavy-duty unobtrusive support. Manufactured of extruded structural aluminum.

508-376-4545
www.rakks.com

| Circle Reader Service #177

Rain Resistant Louver Line Expanded

10 Specialties

Airolite

The AIROLITE Company is expanding its Storm Class™ wind-driven rain louver line to include a new product with superior rain resistance performance. New AIROLITE Louver Type SCH4 is a 4-in.-deep, horizontal, stationary blade louver rated under AMCA Standard 500-L-99, Wind Driven Rain Water Penetration Test. It expands AIROLITE's existing Storm Class™ product range, which includes 5-in.-, 6-in.-, 7-in.- and 8-in.-deep louvers. For more than 85 years, AIROLITE has served as the innovative leader in the design and manufacture of architectural louvers, grilles, screens and sun controls. For more information visit their web site or call.

740-373-7676
www.airolite.com

| Circle Reader Service #175

Flexible Architectural Solutions

10 Specialties

Steelcase

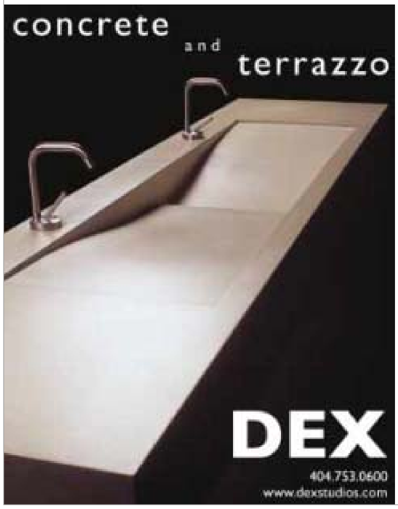
Pathways Architectural Solutions integrate architecture, furniture and technology with an innovative construction process to create a better building and a more effective workplace. A better way to build for the future, the portfolio includes moveable walls, access floors, modular power and cabling and lighting solutions. A superior alternative to traditional construction that's simpler to build, easier to change, more environmentally responsible and much more cost-effective.

616-698-4027
www.steelcase.com

| Circle Reader Service #178

Precast Concrete & Terrazzo Products

10 Specialties



DEX Studios

DEX manufactures precast architectural concrete and terrazzo products for commercial, multi-unit, and residential applications. Superior finishes and colors in both cast concrete and terrazzo are available in sinks, bathtubs, shower pans, tile, bar and countertops, tabletops and fireplaces. All DEX products are polished to a hard dense finish and sealed to protect the finished product. DEX offers a wide range of standard products, custom design capabilities and several Green products using post consumer recycled aggregates.

404-753-0600
www.dexstudios.com

| Circle Reader Service #176

Wear-Resistant Furniture

12 Furnishings

Kwalu

Kwalu wall protection is the newest addition to a collection of virtually indestructible, scuff- and scratch-resistant furniture, tables and casegoods. Combining unsurpassed excellence in design with a 10-year warranty on construction and finish, Kwalu wall protection systems are ideally suited to the most challenging environments where striking elegance and effortless functionality is the dream. Call, or visit the Web site.

800-405-4331
www.kwalu.com

| Circle Reader Service #179

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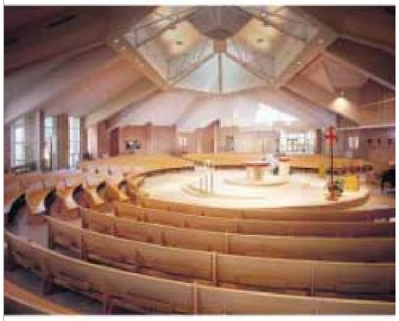
Curved Church Pews

12 Furnishings



New Holland Church Furniture

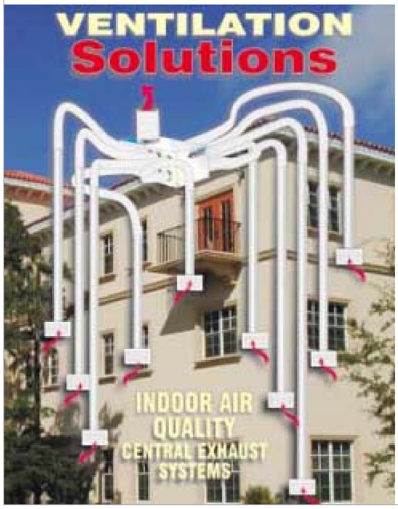
Curved pews are "Round For A Reason"™ and are designed and manufactured by New Holland Church Furniture. Curved pews are designed for maximum seating, curved for efficient use of space, designed to enhance worship, created for community, uniting the family of God. New Holland Church Furniture is a certified member of the Architectural Woodwork Institute (AWI), so you can be assured of the very highest quality. Email nhcw@newhollandwood.com.

800-220-1465
www.newhollandwood.com

| Circle Reader Service #180

Exhaust Ventilation Systems

15 Mechanical



American Aldes Ventilation Corp.

American ALDES manufactures central bath and IAQ exhaust ventilation systems for multifamily housing. Similar to the popular ALDES single-family systems, the energy efficient MPV multiport ventilators prevent mold growth caused by activity based indoor humidity levels. The silent and low continuous background ventilation rates are controlled by the MPV Multi's self-regulating air duct system. This guarantees precise IAQ control and energy efficiency for the owner. Installers appreciate the pre-calibrated and self-balancing feature of the MPV system.

800-255-7749
www.americanaldes.com

| Circle Reader Service #183

Translucent Rigid Panels

13 Special construction

American Acrylic Corporation

LUMAsite@ sheets and diffusers combine the durable beauty of acrylic with the shatterproof strength of glass fibers. These translucent rigid panels are available in elegant rice-paper, parchment and frosted effects, translucent whites, jade and sky tints, fabric embedments, and bright colors. In use internationally, U.S.-made LUMAsite@ sheets and diffusers offer architects and designers elegant choices for architectural and display lighting, partitions, illuminated walls, glazing panels, window treatments, sign backgrounds and much more.

800-627-9025
www.americanacrylic.com

| Circle Reader Service #181

Architectural Ceiling Fans & Lighting

16 Electrical

G Squared

Balanced design that pleases the eye, and creates a mood and a gentle breeze. Moving sculpture: The San Francisco ceiling fan, a GOOD DESIGN Award winner. Whisper quiet, powerful and beautifully made, this timeless design can be used on 8-ft. ceilings or on cathedral ceilings with optional downrods up to 6-ft. long. Suitable for sloped ceilings up to 29 degrees. Lifetime warranty. To buy high-design architectural fans and lighting please visit G Squared's website or call between 7 A.M. and 6 P.M. PST.

877-858-5333
www.g2art.com

| Circle Reader Service #184

X-Ray Radiation Shielding

13 Special construction

Fluke Biomedical, Radiation Management Services

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631-374-3180
www.flukebiomedical.com

| Circle Reader Service #182

Lighting Control Systems

16 Electrical

LiteTouch
5000 LC
CAUTION

LiteTouch

Look to LiteTouch for the most powerful lighting control system for new construction. The 5000LC CCU is unequaled for controlling large numbers of lighting loads and for easy, custom programming. Beautiful control stations allow for the control of any and every light in the house. This system integrates with virtually all other home automation systems from motorized window coverings to HVAC and security.

888-LITETCH
www.litetouch.com

| Circle Reader Service #185

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National Gypsum.

Architectural Sales Account Executive

National Gypsum Company, a leading manufacturer in the building products industry, has an immediate need for an **ARCHITECTURAL SALES ACCOUNT EXECUTIVE** in the Atlantic and Northeast regional markets.

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www.nationalgypsum.com/careers/

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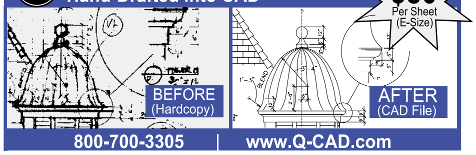

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archrecord.construction.com

Don't Do It Half-Grassed!

Grasspave²

Grasspave2 (right) has 100% grass coverage, 5721 psi compressive strength, 92% void space for the healthiest root zone, and is made from 100% recycled plastic. Gravelpave2 (not shown) is beautiful too!

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invisiblestructures.com

Invisible Structures, Inc.

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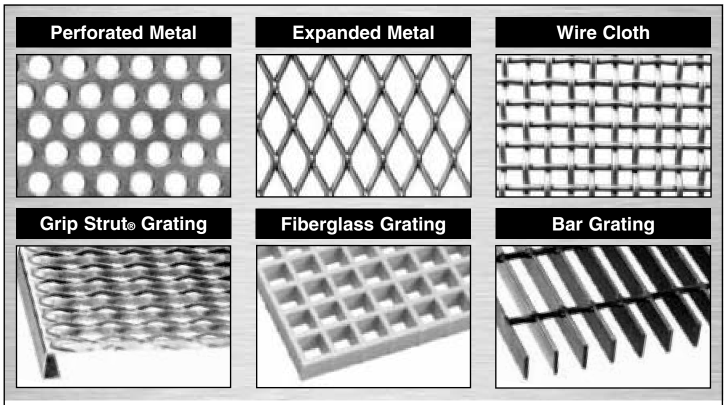
Hole Products



Custom Fabrication to Your Specs!

Complete **Hole Product** inventories are available from Service Centers coast to coast in a variety of styles, sizes and materials.

The Hole Story®
ISO 9001:2000 Certified

Our website has complete product specifications, load tables, drawings, photographs and more.
www.mcnichols.com

1-800-237-3820

McNICHOLS CO.
e-mail: sales@mcnichols.com
www.mcnichols.com

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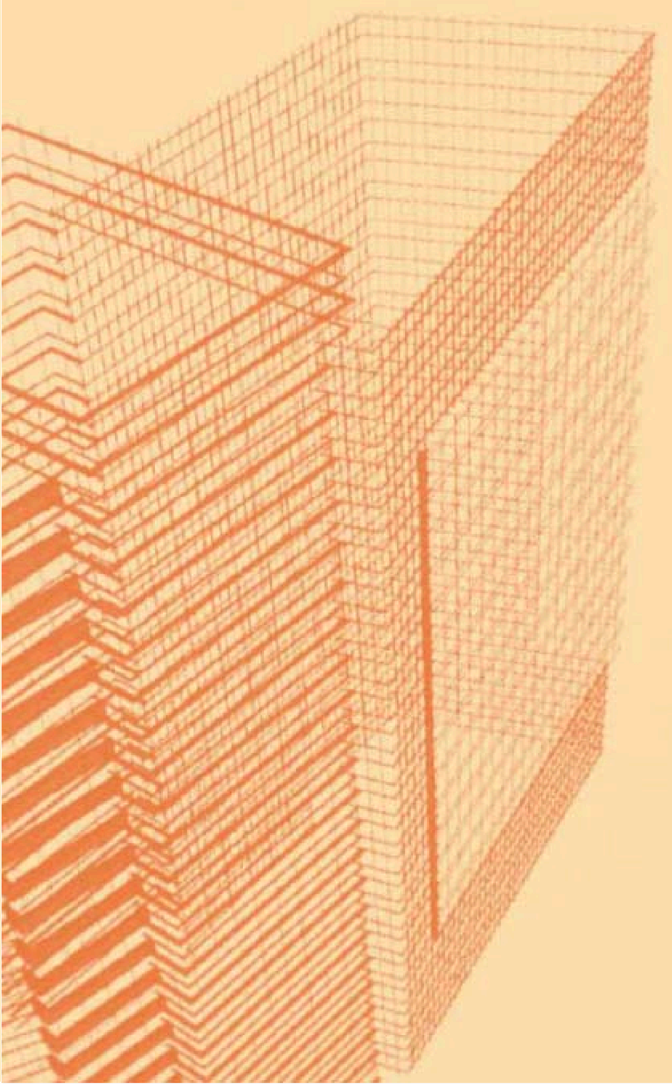
Call for Presentations

Find your place on the EDGE and share your knowledge by presenting at the 2006 AIA Convention.



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Submit your proposal today for half- and full-day preconvention workshops and 60- and 90-minute seminars.

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Innovation...Engagement...Inspiration

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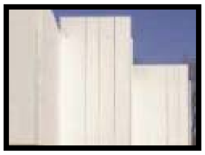

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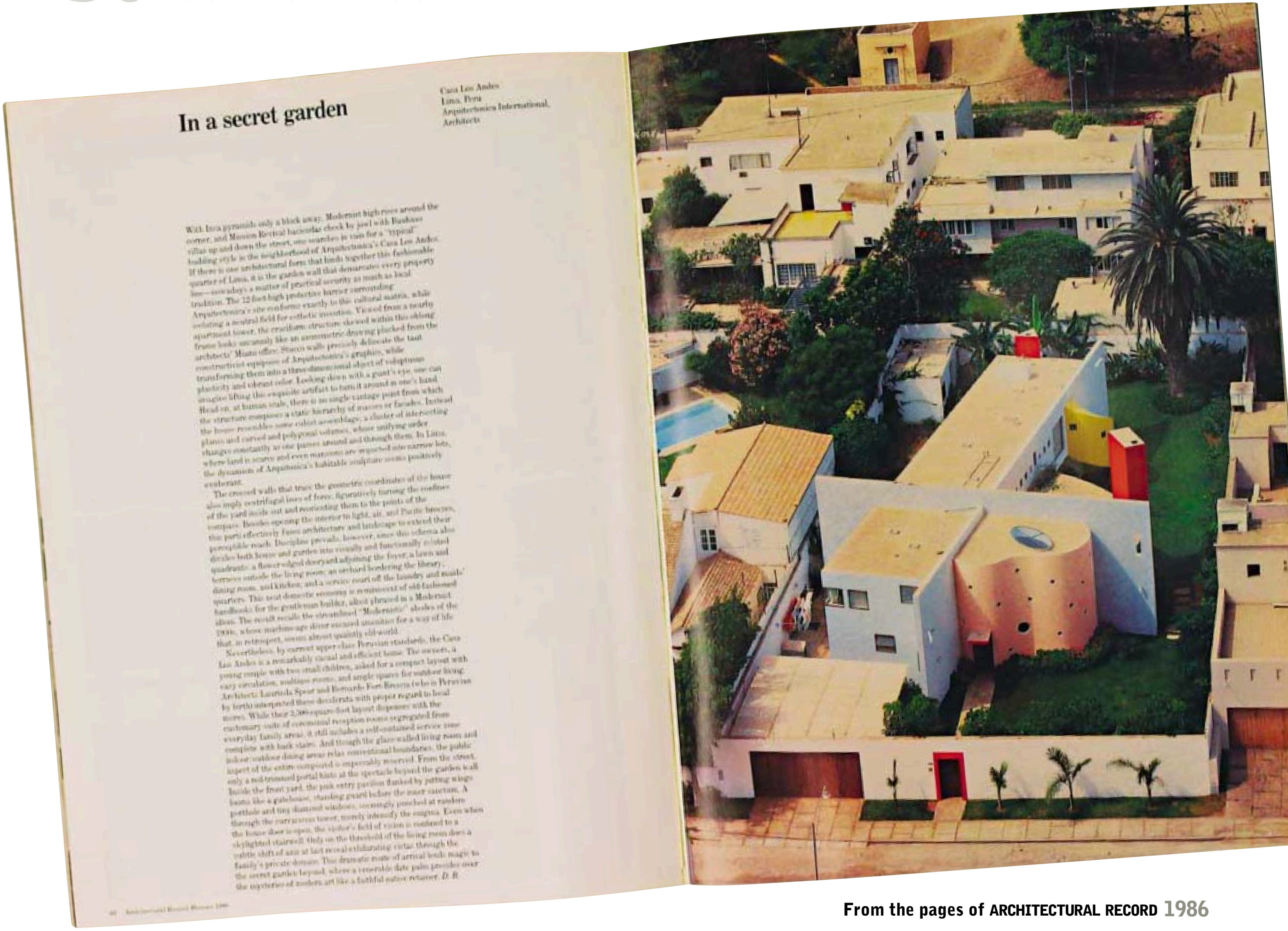


In a secret garden

Casa Los Andes
Lima, Peru
Arquitectonica International,
Architects

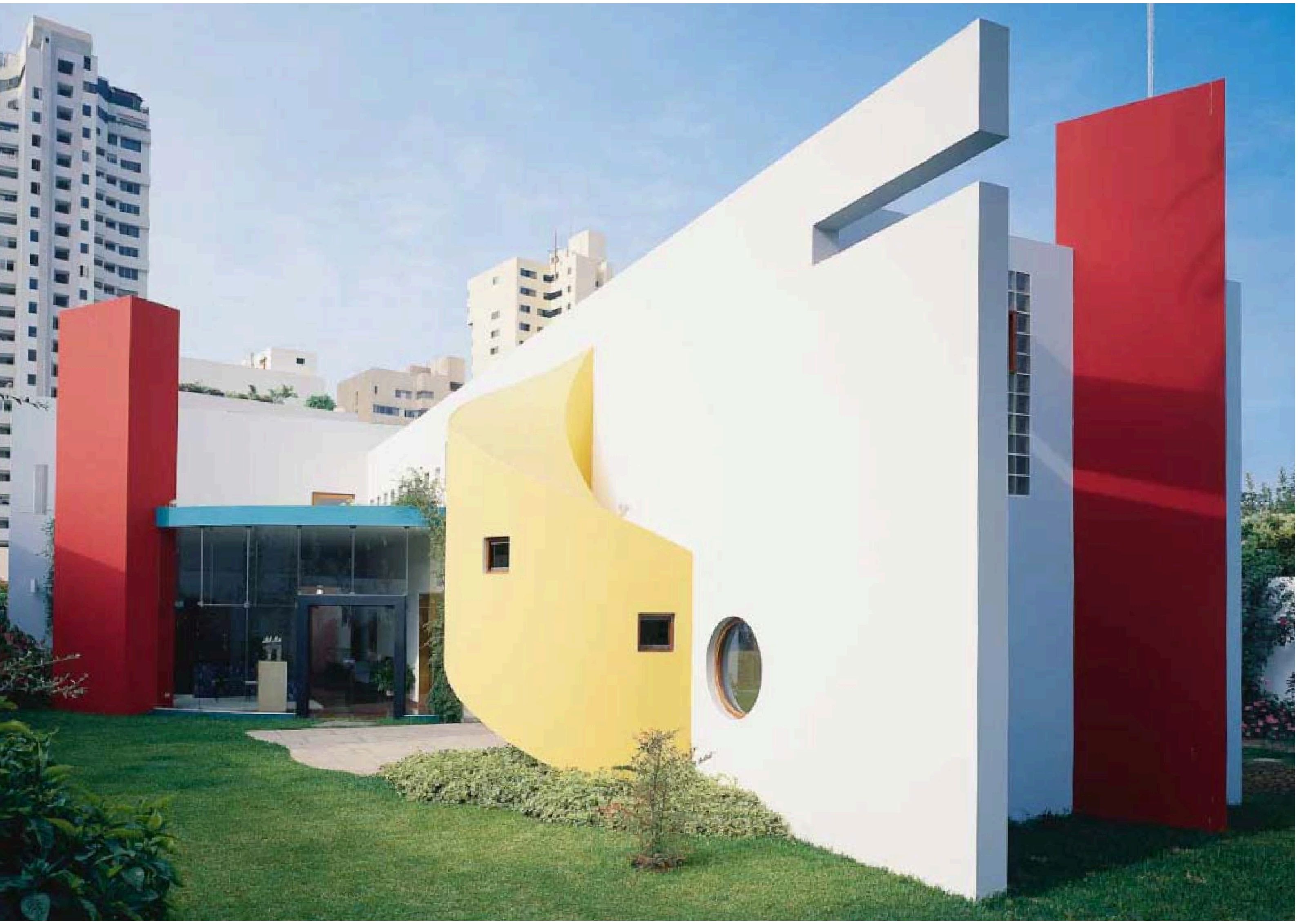
From the pages of ARCHITECTURAL RECORD 1986

Same House, More Yard

By Sam Lubell

PHOTOGRAPHY: © ROBERTO HUARCAYA (BOTTOM)

For future generations seeking a symbol of playful 1980s architecture, one case study should surely be Arquitectonica's 1984 Casa Los Andes, in Lima, Peru. The bright red, yellow, pink, and white structure, a crucifix form composed of a cluster of intersecting planes and curved volumes, was designed for Arquitectonica partner Bernardo Fort-Brescia, FAIA's sister, her husband, and two small children. Gardens surrounding the 3,500-square-foot house can be glimpsed from the interior through diamond-shaped, circular, triangular, and elliptical windows; oval skylights further animate the space. Inside, multiuse rooms and straightforward circulation yield simple living spaces, despite the house's subtly shifting axes. Visual manipulation—including changes in color and scale, and the creation of internal view corridors—give the four separate areas of the interior a distinct atmosphere. Outside, the grounds contribute to the unique character of each quadrant: The entrance garden, to the southeast, brims with roses; the southwest patio, which includes a car entrance, is more utilitarian; the northwest contains a courtyard with fruit trees; and the northeast quadrant,



This page: **The house's whimsical forms and bright colors (above) are complemented by the fanciful hallway windows and skylights visible in the interior (below).**

Previous page: **The house originally had a much smaller yard (top). Expanded landscaping includes a pool (bottom).**

(continued from previous page) protected at the rear from tropical winds, is the most lush.

Casa Los Andes owners Jan Mulder and Sylvia Fort have been diligent in preserving its original spirit. Any change in furniture, layout, artwork, or maintenance elicits a call to the architects for approval. So the house has changed little. Only one major alteration has occurred: the enclosure of a breezeway between the study and dining room, with sliding glass doors to keep Lima winters at bay.

The northeast garden was expanded about five years after completion by annexing an adjacent lot. This area has become what Fort-Brescia calls a "romantic garden," rather than the more tightly arranged spot it once was. The yard now includes a rich assortment of trees along its perimeter, including 15 types of palm, as well as apple, peach, and avocado. Bougainvillea and geraniums bloom here, amid contemporary Peruvian sculptures in bronze, marble, and ceramic. Only about a month ago, one of the most dramatic changes reached completion: An 82-foot-long pool now extends from the central breezeway into the garden. Off-white travertine marble has replaced the expanded terrace's dark, local stone, called Laja, which tended to scorch bare feet. To maintain uniformity, the owners made the same marble substitution where Laja originally lined the house's entryway. Finally, a small new garage stands within the expanded garden, but remains intentionally discreet, respecting the country's strong feelings against ostentation.

The house, says Fort, has been a wonderful place to live, providing bright color and copious light in a country where much of the year is gray. Its moderate size makes it practical, requiring minimal maintenance, while it remains cozy, even with the children grown and the nest empty. ■

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